

*All flesh is grass, and all its glory fades
Like the fair flow'r dishevell'd in the wind,
Riches have wings, and grandeur is a dream;
The man we celebrate must find a tomb,
And we that worship him, ignoble graves.
Nothing is proof against the gen'ral curse
Of vanity, that seizes all below.
The only amaranthine flow'r on earth
Is virtue; th'only lasting treasure, truth.*

WILLIAM COWPER
from 'The Task'

MYTH AS MATH

MYTH AS MATH

*Calendrical Significance in the
Mosaic Census of the Sons of Israël*



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Such were the men registered by Moses, Aaron and the leaders of Israel, of whom there were twelve, each representing his patriarchal House. Every man of Israel of twenty years and over, fit to bear arms, was counted according to his patriarchal House. Altogether the full total was six hundred and three thousand five hundred and fifty. But the Levites and their patriarchal tribes were not included in the count. [Editor's footnote: Not historically accurate; this figure implies that Israel's total population was 2,500,000.] NUMBERS I: 44-7

Altogether, the total count of Levites of the age of one month and over, whom Moses numbered by clans as Yahweh had ordered, came to twenty-two thousand.
NUMBERS II: 39

As Yahweh ordered, Moses took a census of all the first-born of the sons of Israel. The total count, by name, of the first-born from the age of one month and over came to twenty-two thousand two hundred and seventy-three. NUMBERS III: 42/3

MOSSES AND THE CHILDREN OF ISRAEL had been out of Egypt a year and a month when Yahweh commanded him to conduct a census of all the males twenty years old or older, fit to bear arms. Aided by his elder brother Aaron and the head of each of the twelve ancestral clans,¹ Moses convened the community in the wilderness of Sinai “on the first day of the second month, in the second year after the exodus”,² and began the count.

The Children of Israel – following 430 years in Egypt – had left the city of Rameses in the Nile Delta³ “on the very day the four hundred and thirty years ended”.⁴ They had been at Mt Sinai ten months before the census was begun.

“Such were the men registered by Moses, Aaron and the leaders of Israel, of whom there were twelve, each representing his patriarchal House. Every man of Israel of twenty years and over, fit to bear arms, was counted according to his patriarchal House. Altogether the full total was six hundred and three thousand five hundred and fifty.” [NUMBERS 1: 44–6]⁵

The tribe of Levi was specifically excluded by Yahweh who directed Moses to “enroll [them] to serve the tabernacle of the Testimony and to look after its furnishings and its

1 Elizur of Reuben; Shelumiel of Simeon; Nahshon of Judah; Nethanel of Issachar; Eliab of Zebulun; Elishama of Ephraim; Gamaliel of Manasseh; Abidan of Benjamin; Ahiezer of Dan; Pagiel of Asher; Eliasaph of Gad; Ahira of Naphtali [NU 1: 5–15] – together with Aaron of Levi, a total of thirteen ‘scrutineers’, arguably resounding the 13 months in ‘a year and a month’ since their departure from Egypt

2 NUMBERS 1: 1

3 *Rameses (Ra’amses)*, established by the Hyksos as their capital *Avaris*, was destroyed by Ahmose I, then rebuilt (with help from the Israelites – EXODUS 1: 11) by Seti I and his son Rameses II as the new capital of the 19th Dynasty, when it was known as *Tanis* [ANDERSON, *Understanding the Old Testament*, pp32/3]

4 EXODUS XII: 41

5 Reuben 46,500; Simeon 59,300; Gad 45,650; Judah 74,600; Issachar 54,400; Zebulun 57,400; Ephraim 40,500; Manasseh 32,200; Benjamin 35,400; Dan 62,700; Asher 41,500; Naphtali 53,400 [NUMBERS 1: 20–43]

6 belongings".⁶ Later Yahweh instructed Moses to take a separate "census of the sons of Levi by families and clans; all the males of the age of one month and over".⁷

"Altogether, the total count of Levites of the age of one month and over, whom Moses numbered by clans as Yahweh had ordered, came to twenty-two thousand." [NUMBERS 11: 39]⁸

This was followed by another census of those sons of Levi "between thirty and fifty years of age, fit to bear arms and liable for serving or carrying in the Tent of Meeting".⁹ Their total amounted to eight thousand five hundred and eighty.¹⁰

Thus, in the 431 years and one month since Jacob and his sixty-nine relations¹¹ had emigrated to Egypt, the sons of Israel had apparently managed to proliferate in numbers to a strength of 603,550 men (suggesting a total population at their exodus, near 2,500,000). A number supported by the account of their departure in *Exodus*: "The sons of Israel left Rameses for Succoth, about six hundred thousand on the march – all men – not counting their families".¹²

In Bernhard Anderson's estimation this number must be "an exaggeration, for it does not square with the information in *Exodus* 1: 15–20 that two midwives served the whole Hebrew colony. Needless to say, the Delta area [in Egypt] could not have accommodated that many Hebrews, and the wilderness of southern Canaan could not have supported them."¹³

Timothy Ashley cites, as further reasons for concluding that such figures appear inflated, estimates of a population in Canaan at the time of the Exodus below three million, and an armed force of no more than 20,000 Egyptians.¹⁴

6 NUMBERS 1: 50

7 NUMBERS 11: 15

8 Gershon 7500; Kohath 8300; Merari 6200 [NUMBERS 11: 21–34]

9 NUMBERS 14: 47

10 Gershon 2630; Kohath 2750; Merari 3200 [NUMBERS 14: 38–48]

11 including Joseph and his two sons [GENESIS 46: 26/7]

12 EXODUS 12: 37

13 ANDERSON, *Understanding the Old Testament*, p50

14 'Excursus on Large Numbers' in *The Book of Numbers*, p60–6

He goes on to add, “this group of problems has been admitted by scholars *across the theological spectrum*. In the light of these, and other obvious and serious problems, various scholars have attempted to understand these figures in a way that does not take them at face value.”¹⁵ This includes strained attempts at translating the Hebrew term for “thousand” as “men at arms” – which unfortunately failed to address the numbers provided for the census of the Levites, among other things.

Ashley also points out that the various versions of the Old Testament – Hebrew Massoretic, Samaritan Pentateuch, Greek Septuagint (and presumably the Syriac Peshitta) – are all in accord on these sums, obviating the likelihood of faulty transcription.¹⁶

THE CENSUS OF THE LEVITES was followed by a census of the first-born sons of Israel for whom Yahweh instructed Moses to *substitute* the Levites.

“The total count, by name, of the first-born from the age of one month and over came to twenty-two thousand two hundred and seventy-three.” [NUMBERS III: 43]

But the Levite census (22,000) fell 273 short of the number of first sons (22,273) forcing Moses, at Yahweh’s command, to exact a ransom of five shekels for each of the ‘truant’ first sons – which he relinquished to “Aaron and his sons” (the ‘sons’ of Levi) as their due.¹⁷

On the day of the Exodus, “Yahweh spoke to Moses and said, ‘Consecrate all the first-born to me, the first issue of every womb, among the sons of Israel. Whether man or beast, this is mine.’” He went on to explain, “Of your sons, every first-born of men must be redeemed. And when your son asks you in days to come, ‘What does this mean?’ you will tell him, ‘By sheer power Yahweh brought us out of Egypt, out of the house of slavery.... For this I...redeem every first-born of my sons.’”¹⁸

15 ASHLEY, *The Book of Numbers*, p61 (emphasis added)

16 ASHLEY, *op cit*, p66

17 NUMBERS III: 46–8 (a compound ransom of 1365 shekels)

18 EXODUS XIII: 1/2, 13/4 (‘redeem’ signifying “take back”)

This suggests that the tribe of Levi *became* a ‘tribe’ of the first sons of the other tribes, consecrated to Yahweh in the service of the priesthood. Which is why primogeniture could not be practiced by the Israelites – younger sons such as Isaac, Jacob, Joseph, Moses, David and Solomon, clearly distinguished as the rightful heirs to the temporal, while elder sons apparently presided over the spiritual, estate (explaining the absence of a territory deeded to the Levites in the later apportionment of the lands of Canaan – which relegated them to domicile in the 48 cities of refuge).¹⁹

The census of first sons introduces a further incongruity in a literal interpretation of these figures: a 27-to-1 ratio of Israelite males to first sons. As Timothy Ashley points out, “[t]his means that a firstborn male must have had, on average, twenty-six brothers, not to mention sisters. Unless polygamy was the common practice in this period (and no evidence suggests that it was), this kind of ratio is not likely on a wide scale.”²⁰

THE CENSUS FIGURES obviously weren’t intended to be taken literally. Either they require interpretation or they are meaningless. “One group of scholars has held that these figures and others throughout the Old Testament are fabrications of the author or compiler of the material. The numbers have no relation to fact.”²¹ Arguably the prevailing consensus among theologians: “It cannot be emphasized too strongly that the primary value of *Genesis*, as indeed of all scripture, is theological. It is possible to devote a great deal of time and energy to all kinds of incidental details and to miss the great theological issues. For example the

¹⁹ NUMBERS XXXV; JOSHUA XIV

²⁰ ASHLEY, *The Book of Numbers*, p61

NOTE ON RATIOS: “...it is surprising and important to realize that very many of the fundamental conceptions in the ‘higher’ mathematics were first defined as special combinations of ratios. In many cases *the original meaning is lost*, but this is merely another way of saying that the new terms and conceptions *have absorbed and reinterpreted the old*.” (emphasis added) [BUCHANAN, *Poetry and Mathematics*, p101]

²¹ ASHLEY, *op cit*, p61

story of the Flood speaks of sin, judgment, redemption, new life. To be occupied with details about the size of the ark, and with the problems of feeding or of the disposal of refuse, is to be concerned with side issues.”²²

Another interpretation holds that the figures derive from a later period, introduced to reflect the population of Israel closer to the time of the Babylonian Exile (587 BC). Still others “have seen the numbers as symbolic in some way. Some see the figures as partaking of gematria, that is, making the numbers represent a name or saying by their combined numerical values.”²³

Yet the census figures remain enigmatic and unexplained. “In short, we lack the materials in the text to solve the problem. When all is said and done one must admit that the answer is elusive. Perhaps it is best to take these numbers as R. K. Harrison has done – as based on a system familiar to the ancients but unknown to moderns. According to Harrison the figures are to be taken as ‘symbols of relative power, triumph, importance, and the like and are not meant to be understood either strictly literally or as extant in a corrupt textual form.’”²⁴

Why is it that numbers and ages in the Old Testament remain incomprehensible? The care with which details are preserved in Biblical narratives suggests that such figures are not ornamental but crucial to the accounts. “You shall not add to the word...nor take from it...”²⁵ – accurate transmission, an indispensable ‘fence to the Torah’. Why have these census figures survived so precisely in each of four textual traditions if not because they were recognized to harbour potentially critical insights? “We have given practical proof of our reverence for our own Scriptures. For, although such long ages have now passed, no one has ventured either to add, or to remove, or to alter a syllable; and it is an instinct with every Jew, from the day of his

22 WRIGHT & THOMPSON, ‘Book of Genesis,’ *New Bible Dictionary*, p413

23 ASHLEY, *The Book of Numbers*, p62

24 ASHLEY, *op cit*, p66

25 DEUTERONOMY IV: 2

birth, to regard them as the decrees of God, to abide by them, and, if need be, cheerfully to die for them.”²⁶

Having identified a continuous tradition of lunar ‘priests’ extending back to the Ice Age (and arguably beyond) – which led to the discovery of the origin of the alphabet²⁷ – I maintain that the quintessential significance of ancient scripture is in fact calendrical not theological. The lunar focus of the culture from which Abraham departed, lends to the suspicion that mysteries such as the Israelite census might be profitably interpreted as calendrical measures.

THE LEVITES NUMBERED 22,000. Dividing this figure by 365 (the round number of days per year) produces a quotient of 60.273972. In other words, 60 years of 365 days amounts to 21,900 days; while .273972 years equals 99.99978 days (or in round numbers: 100 days). The scripture emphasizes that the sum 273 is *meant* to be perceived as a remainder, in the narrative of the ‘ransom’ of the *extra* first sons.

The figure 273 harbours further calendrical significance in that it incorporates three seasons of 91 days ($3 \times 91 = 273$) or roughly three quarters of a year ($4 \times 91 = 364$).²⁸ Ancient calendars, including that of the Hebrews, reckoned a year of 364 days which required the observance of an intercalary day at the end – the Day of Judgement – to roughly adjust or rationalize their mathematical measure with the actual mechanics of sun and moon. The lunar ‘priesthood’, back to the Palæolithic Age, struggled continuously with the problems of plotting the 18.6-year cycle of the moon²⁹ to establish and preserve a lunar measure, and with the difficulty of reconciling the results with its solar counterpart (365.2422 days).

The *lunar* significance of this three-quarters measure is protracted by reflecting for a moment that the figure 273 might represent months. Dividing it by 12 (the round

26 JOSEPHUS, *Against Apion* 1:8 [42], p609

27 DRUMBOLIS, *God’s Wand; God’s Shadow; Shrouded in Scripture*

28 each ‘season’ comprising 13 weeks ($13 \times 7 = 91$)

29 delimiting the recurrence of the *course* of the moon through the sky – technically, the Regression of the Nodes

number of months in a year) produces a quotient of 22.75 resounding the census of first sons (22,273) by ingeniously substituting the equivalent solar measure (three-quarters of a year) for the signal digits '273' in that figure. What this preserves is the number of first days (or 'first-born') in 273 months (*ie*, 22 years) which must be 'taken back' because the moon is absent from the sky at the beginning of every lunation. In most ancient calendars the two nights each 'month' without visible phases are computed at the beginning of the lunation, but the Hebrews split the dark nights between the end and beginning of their measure.

To recapitulate, calendrical measures concealed in the figure representing the difference between the number of first sons and Levites (273) include: 273 days = 3 seasons; 273 days = 39 weeks; 273 months = 22 years ($273 \div 12.368267 = 22.072615$); and .273 years = 100 days. In otherwords the scriptures appear to preserve a figure which incorporates every interval in the calendar: day, week, month, season and year.

Although the keepers of the scriptures seem to have mislaid the key to such insights (apparently for millennia), they never abrogated the ancestral Covenant to observe and preserve to the letter (and number) their sacred texts.

Explicit calendrical details in the scriptural accounts of the Israelite Exodus from Egypt, invite the entertainment of this analysis. They departed on *the very last day* of their 430-year 'bondage'. On *the third day* at Sinai the Decalogue was pronounced. Moses began his census on *the first day of the second month of the second year* of their 'freedom'. After *forty years* in the wilderness the Israelites entered Canaan – the Chosen People in the Promised Land.³⁰ The minimum age of the first sons and Levites included in the

³⁰ these measures, while equally significant in characterizing the insights of the keepers of the scriptures, require a separate monograph (although it is relevant here to point out that the interval of their removal from Canaan [$430 + 40 = 470$ years] encodes a signal recognizance of the so-called Metonic cycle of 235 lunations [$235 \times 2 = 470$] – in otherwords, the Israelites appear to have been familiar with the 235-month 19-year calendar when the Exodus scriptures were composed)

Mosaic census – *one month* – adjusts the focus to a *lunar* lens. While the commonplace of the clerical (as distinct from the civil) calendar, in every religion, further supports an inescapable calendrical foundation beneath the various scriptural traditions.

As noted, the measure of thirteen months of ‘freedom’ which preceded the census, arguably resounds the number of the Israelite tribes. A solar year extends more than twelve months.³¹ And since two of these tribes are designated as half-tribes,³² the mnemonic of the thirteen tribes proves invaluable in accommodating a variable measure like the 8-year cycle (where 5 years contain 12 months and 3 have 13 – *ie*, 99 months in all), or the subsequent 19-year calendar (where 12 years have 12 months and the other 7 contain 13 – *ie*, 235 months in all).

It must be appreciated that the census of the sons of Israel, conducted on the first day after their thirteenth month of ‘freedom’, invokes the *measure* of this 13-month interval (a calculation, in essence, of what precedes it): ‘at the end of a period of 13 months compute its measure’; or in other-words, the interval of 13 months signifies a calendrical coefficient crucial to the computation of their measure.

EGYPT IS CALLED “the house of slavery”³³ and most of the 430 years the sons of Israel spent there were in bondage. In a calendrical reflection their exodus may prove to have been purely a departure from the prevailing Egyptian tradition – a measure whose lack of refinement bound its adherents to a calendar which required frequent adjustment.

³¹ twelve lunar months roughly equal 354 days (12×29.5) – 11 days short of a rounded year of 365 days [the interval of 354 arguably secreted in the figure 273 when it is taken to represent years: $273 \times 365 = 99,645$ which is 354 days short of 99,999]

³² Manasseh and Ephraim, the sons of Joseph born in Egypt, who *split* their father’s inheritance of the apportionment of Canaan; but because Ephraim also claimed his elder brother’s first-born right [GENESIS XLVIII: 5, 14], three portions are indicated – *ie*, three ‘halves’ or $1\frac{1}{2}$ – the Egyptian ‘half-tribe’ measure representing a focal *adoption* of the Israelite revision

³³ EXODUS XIII: 13/4

A 360-day calendar like that of the Egyptians (requiring an intercalation of five days a year) was decidedly inferior to a calendar of 364 days completed by a single intercalary day. Yet there were other attempts at producing a reliable calendar which needed even less adjustment, such as the *octaeteris* or 8-year 99-month calendar employed in Greece (and arguably Israel). “In the centuries around 700–800 BC, the learned Greeks had adopted a cycle known as the *octaeteris*. This provided for three embolismic months in each eight-year cycle, hence its name. The average of $\frac{3}{8}$ or 0.375 extra months per year was still not very precise, resulting in a day too many being included every five years or so.”³⁴

Curiously, this calendar was adopted in Babylon about 530 BC, a mere two years *after* the exiled Israelites returned from Babylonian captivity, to their homeland. Suggesting that the local resistance to Abraham’s putative revision of the Babylonian calendar (which arguably occasioned his emigration to Canaan), had eroded in the ensuing interval sufficiently for his Mesopotamian relations to entertain its adoption – incited presumably by the Persian conquest.

The account of the birth of Isaac to Sarah and Abraham conceals measures which I contend establish the 8-year 99-month cycle as the innovation Abraham introduced.³⁵ Yahweh (introducing himself as El-Shaddai) appears to Abram when he is 99 years old, proposing a Covenant which will make his descendants kings. He alters the names of Abram and Sarai to Abraham and Sarah (*ie*, adds the letter ‘h’ to both names – *heth* being the eighth letter in the alphabet) and commands Abraham to circumcise his children on the eighth day after their birth. Observing these octave-ordered measures, the legendary progenitor

34 STEEL, *Marking Time*, p46 – requiring adjustment every 5 years while our ‘modern’ measure demands attention every four – yet the author leaves the impression ‘things have improved’...
NOTE the *octaeteris*, including 49 months of 29 days (1421 days) plus 50 months of 30 days (1500 days), completes its cycle every 2921 days; the synodic equivalent for eight years amounting to 2923.5282 days (29.530588×99) – a difference of about 2½ days; the solar equivalent extending 2921.9376 days (365.2422×8)

35 GENESIS XVII

of the 'kingdom of priests and a holy nation' is assured he will be fruitful and establish an enduring supremacy over all nations. The 'birth of Israel' (through Isaac) may prove merely to have 'delivered' a new calendrical measure: the signal 8-year 99-month cycle.

Given Duncan Steel's impression that the *octaeteris* was possibly conceived between the 8th and 7th centuries BC, and my observation that the alphabet is implicated in the alteration of the names Abram and Sarai,³⁶ it seems likely that the Pentateuch was composed, as John Van Seters and T. L. Thompson contend, late in the first millennium BC (perhaps during the Babylonian Exile). The theory of early oral transmission is categorically precluded.

And if my interpretation of the Mosaic recognition of the Metonic cycle is valid, it appears that figures preserved in the Exodus narratives point to the introduction of a new revised measure: the *enneadecateris* or 19-year 235-month cycle. The earliest record of this Metonic measure emerges in 432 BC, when Meton is supposed to have introduced it into Greece from Babylonia.³⁷

THE MINIMUM AGE of the 'sons of Israel' signals a relation to the *interval* described by the ages of the 'Levites fit to bear arms' included in the census – like the equivalent ages of the 'first sons' and 'Levites over one month'. The sons of Israel aged twenty or over included 603,550 men; while the

36 the eighth letter complementing the eighth day, which all but reveals the lunar origin of the alphabet: the 'eighth day of birth' concealing the measure of the seventh 'visible' phase of lunar cycle – or the half-moon (symbolized by the 'exposed' half-moon-like glans of the circumcised penis)

37 "Many lunisolar calendars in use today employ regular repeats of 13-month years in a 19-year cycle, and are said to use the Metonic cycle, even though they may not be the same as the calendar devised by Meton. The Metonic cycle is a cycle of precisely 235 lunations lasting for 6939 days plus a fraction; Meton's calendar design contained exactly 6940 days. Thus there is a difference between them, although one should realize that Meton himself did not have access to measurements of the year length of sufficient accuracy to make this a matter of concern." [STEEL, *Marking Time*, p47]

Levites between 30 and 50 counted 8580. The first group appears to represent ‘minus 20’; the older ‘plus 20’. But because the tribe of Levites is arguably composed of eldest sons (a select measure of the populace), the common reduction seems to invite division:

$$603,550 \div 8580 = 70.343822$$

a quotient which proves 3.1582553 times greater than the ‘first-son’ figure of 22.273 – a factor very close to the value of Egyptian ‘pi’.³⁸

Curiously, this Egyptian value was recorded by a scribe at the Hyksos capital of Avaris sometime between 1650 and 1550 BC (according to conventional Egyptian chronology) – Avaris, the city the Israelites are supposed to have helped rebuild during the reigns of Seti I and his son Rameses II, before escaping into the wilderness.³⁹ His Rhind Papyrus (as it is known today) comprises 14 sheets delineating 84 problems – the most extensive of the eight extant Egyptian

- ³⁸ in otherwords, $603,550 \div 8580 \approx 22.273\pi$
 NOTE the value of ‘pi’ – a measure of the ratio of the diameter of a circle to its circumference – has varied considerably since its initial measurement in antiquity using string the length of a diameter: *Babylonian* figured as $3 + \frac{1}{8}$ (or 25 eighths) = 3.125; *Egyptian* computed either as the square root of 10 = 3.16[22776] or $4 \times (8 \text{ ninths})^2 = 3.16[04928]$; *Chinese* 3; *Hebrew* 3, citing the Old Testament – I KINGS VII: 23; II CHRONICLES IV: 2 – although H. Peter Aleff strongly objects to a literal interpretation of these passages in his article ‘The Mathematics of Genesis 1’ at recoveredscience.com; *Archimedes* of Syracuse (287–212 BC) whose ‘Average of the Bounds’ measure remains the oldest extant theoretical calculation: $3 < \pi < 2\sqrt{3} \rightarrow 223/71 < \pi < 22/7 \rightarrow 3.140845 < \pi < 3.142858$; *Vitruvius* (20 BC) figured as 25 eighths = 3.125; *Hon Han Shu* (130 AD) figured as the square root of 10 = 3.1622[776]; *Ptolemy* (150 AD) 3.14166; *Wang Fan* (250 AD) figured as $142/45 = 3.15555$; *Liu Hui* (263 AD) 3.14159; etc (note the absence of Pythagoras, Anaxagoras, Euclid and Hipparchus) [J. J. O’CONNOR & E. F. ROBERTSON, ‘A Chronology of Pi’ at www-groups.dcs.st-and.ac.uk/~history; PAUL GUSMORINO, ‘Paul’s Page of Pi’ at www.escape.com/~paulg53/math/pi]
- ³⁹ cf. Abaris the High Priest of the Hyperboreans [‘Druids’] who gave Pythagoras the ‘dart’ [cf. lunar crescent] which conveyed him “over rivers and seas and inaccessible places, like one walking on the air” [TAYLOR, *Iamblichus* A, p249]

mathematical treatises. Aahmesu,⁴⁰ it is believed, copied the texts in hieratic script from an older Egyptian source. Yet as V. Gordon Childe relates, other Egyptian measures – like “the curious formula for the volume of a truncated pyramid: $\frac{1}{3} h (a^2 + ab + b^2)$, where ‘a’ stands for length of base and ‘b’ length at top – which was never used in Mesopotamia” – could be calculated through measurement. “But the Egyptian approximation to π , $(16/9)^2$, much more accurate than the Sumerians’ 3, is not easily explained.”⁴¹

Using a rope sectioned in varying-coloured hundredths would produce a reliable measure (to two decimal-places) of the ratio of diameter to circumference of the circle, yet how would the ancient lunar surveyor graduate from this linear measure to its abstract mathematical counterpart? Adopting the Egyptian-equation construct, for example, how do you get from ‘its sixteen-hundredths, its whole, its whole, its whole, it makes three-and-sixteen-hundredths’ to the concept of [A] ‘the square root of 10’; [B] ‘ $4 \times (8/9)^2$ ’; [C] ‘ $(16/9)^2$ ’; or considerably later [D] ‘ $22/7$ ’? Were these formulæ advanced expediently, purely for their solutions approaching the empirical measure demonstrated with the rope; or were these figures related conceptually to a more meaningful computation of the applied ratio of diameter to circumference (as I have speculated).⁴²

Comparing the various values of π among these formulæ – [A] 3.1622776; [B] 3.1604928; [C] 3.1604935; [D] 3.1428571 – confirms the impression that the ancient measure of ‘pi’ appears to have been progressively refined from 3.16 to 3.14.

- 40 his name or title, also written Ahmes, means “moon-diviner” – as one might expect of a lunar surveyor – the document further preserving advanced methods for computing volumes and areas, including the area of a circle: $(d - 1/9 d)^2$; as well as 11 examples of linear equations with one unknown quantity (designated ‘hau’ or “heap”): eg, “heap, its seventh, its whole, it makes nineteen” $[x/7 + x = 19 \rightarrow x (1/7 + 1) = 19 \rightarrow x = 19 \div 8/7 = 16.625]$

41 CHILDE, *What Happened in History*, pp119/20

42 DRUMBOLIS, *God’s Shadow*, p17

NOTE that the measure of ‘16 hundredths’ breaks the unit into 6.25 equal parts (ie, $.16 \times 6.25 = 1$) – which adds considerable significance to the “heap” equation presented in footnote 40

THE NARMER MACE-HEAD uncovered at Hierakonpolis in 1897/8 bears characters on its surface which are identical to the subsequent “hieroglyphic symbols for the number 1,422,000”⁴³ – which, it remains generally unrecognized, is exactly divisible by 3.16: the early Egyptian measure for ‘pi’.⁴⁴ Unless it proves a monstrous coincidence, this figure preserves evidence of a much earlier registration of the measure of ‘pi’ [$79/25 = 3.16$] than has ever previously been demonstrated (Narmer conventionally identified as the earliest dynastic pharaoh – also known as Menes, meaning “moon” – who is supposed to have united Upper and Lower Egypt sometime around 3100 BC).

Now the Israelites spent precisely 430 years in Egypt. This amounts to 156,950 days (computing a year at 365 days) – a product of two signal factors: $50,000 \times 3.139$. A figure proving remarkably congruent with the old Narmer mace-head measure, when factored $9 \times 50,000 \times 3.16$.

In otherwords, a figure arguably conceived about 3100 BC which incorporates a factor of the old pi-measure (3.16) also harbours a coefficient which happens to recur in a figure traditionally held to have originated at least 1800 years later, which likewise appears to harbour a pi-measure – though *its* value seems to have been ‘refined’ (3.139).

And the later measure is characterized as a ‘departure’ from the earlier – the Israelites *leaving* the restored capital of the old measure’s curators to preside over a ‘promising’ new order. In otherwords, their refinement of the traditional calendrical measure would prove unacceptably disruptive on continued observance in their ‘adopted’ land.

THE NEW ISRAELITE MEASURE incorporated the 29-day month – their year computed as eleven 29-day months ($29 \times 11 = 319$) plus $1\frac{1}{2}$ thirty-day months ($30 \times 1\frac{1}{2} = 45$):⁴⁵ $319 + 45 = 364$ (requiring a single intercalary day). Eleven

43 RUDGLEY, *The Lost Civilizations of the Stone Age*, p16

44 $1,422,000 \div 3.16 = 450,000$ [DRUMBOLIS, *God’s Shadow*, p17]

45 because the half-tribe was conceived on the ‘old’ monthly measure of 30 days indicated for the sons of Joseph ‘native’ to Egypt (NB: Ephraim granted the *greater* portion by Jacob)

‘tribes’ native to the new 29-day order plus one-and-a-half *nostalgic* for their ancestral Egyptian measure. Which not only tendered an ingenious mnemonic for the number of months in a solar year, but also later arguably gave rise to the 13-month calendar of 28-day months ($13 \times 28 = 364$) of four seven-day weeks, with the letters of the alphabet in sequence designating the names of the months (where the submerged intercalary Day of Judgement harboured the figurative secretion of five hidden vowels sounding up the unspeakable name of Yahweh: IEUOA).⁴⁶ [cf, p176]

In an eight-year cycle the new measure would comprise 88 months of 29 days ($88 \times 29 = 2552$) plus 12 months of 30 days ($8 \times 1\frac{1}{2} \times 30 = 360$) or 100 months totalling 2912 days – which would require the addition of at least 9 intercalary days per cycle to approach the celestial equivalent.⁴⁷ Thus the mnemonic of eleven new-measure and one-and-a-half old-measure ‘tribes’ was ultimately refined to the *octaeteris* measure of five 12-month plus three 13-month years (comprising forty-nine 29-day months plus fifty 30-day months) requiring the addition of only a day *per cycle*.⁴⁸

The priests of Memphis, Heliopolis and Thebes informed Herodotus that the Egyptians “were the first to discover the solar year, and to portion out its course into twelve parts. They obtained this knowledge from the stars. (To my mind they contrive their year much more cleverly than the Greeks, for these last every other year intercalate a whole month, but the Egyptians, dividing the year into twelve months of thirty days each, add every year a space of five days besides, whereby the circuit of the seasons is made to return with uniformity.)”⁴⁹

This fifth-century-BC report has unfortunately coloured the perception of antecedent Egyptian measures: “while in Egypt the Hebrews may have conformed to the solar year of twelve months, each of thirty days plus five additional days,

46 script otherwise *mute* [DRUMBOLIS, *Shrouded in Scripture*, p41]

47 solar equivalent for 8 years: $8 \times 365.2422 = 2921.9376$ days;
synodic equivalent for 8 years: $99 \times 29.530588 = 2923.5282$ days

48 $[49 \times 29] 1421 + 1500 [50 \times 30] = 2921$

49 RAWLINSON, *The History of Herodotus* II: 4, VOL I, pp111/2

ie, 365 days, but if so a change was made thereafter and the 'beginning of months' or first month of the year was fixed in the spring (EX XII: 2; XIII: 3/4; XXIII: 15; DT XVI: 1, 6)."⁵⁰

The account of Herodotus serves further to contextualize present-day incredulity toward the Israelite census figures, with his notoriously similar impatience with *marvellously credulous ancestors* who 'lacked the erudition' to question the preposterous fabrications of Greek mythology.⁵¹

50 *New Bible Dictionary*, p159

NOTE Herodotus earlier betrays his 'carelessness' regarding calendrical measures: "Seventy years I regard as the limit of the life of man. ('The days of our years are threescore and ten.' PSALM XC: 10) In these 70 years are contained, without reckoning intercalary months, 25,200 days. Add an intercalary month to every other year, that the seasons may come round at the right time, and there will be, besides the 70 years, 35 such months, making an addition of 1050 days. The whole number of the days contained in the 70 years will thus be 26,250...". EDITORIAL NOTE: "No commentator on Herodotus has succeeded in explaining the curious mistake whereby the solar year is made to average 375 days. That Herodotus knew the true solar year was not 375, but more nearly 365 days, is clear from BOOK II: 4. Two inaccuracies produce the error in Herodotus. In the first place he makes Solon count his months at 30 days each, whereas it is notorious that the Greek months, after the system of intercalation was introduced, were alternately of 29 and 30 days. By this error his first number is raised from 24,780 to 25,200; and also his second number from 1033 to 1050. Secondly, he omits to mention that from time to time (every 4th $\tau\rho\iota\epsilon\tau\eta\rho\iota\varsigma$ probably) the intercalary month was omitted altogether." [RAWLINSON, *The History of Herodotus* I: 32, VOL I, pp15/6] The solar cycle of 70 years comprises 25,566.954 days (70×365.2422) – 683 days less than the sum of Herodotus (26,250) and 246 less than the adjusted sum of the editor (25,813) – though the *calendrical* 70-year measure was computed at 25,550 days (365×70). [cf, p256]

51 Herodotus, who likely visited Egypt between 460–455 BC (between his 24th and 29th years) repeatedly dismissed what commonsense dictated could only be absurd and foolish tales from the past; an undertone palpable in current rejections of the census figures based on the problems of a literal interpretation: (A) tents – about a quarter-million (at 10 per tent) occupying 40 square yards each, or 12 miles square overall; (B) holocausts – an endless slaughter of animals sacrificed to Yahweh requiring a priesthood greater than three; (C) refuse – accumulating in massive volumes; (D) deaths – 170 a day for 40 years; (E) fuel

The patriarchal genealogies confirm the precedence of the eight-year cycle of the new Isrælite measure of eleven 29-day plus one-and-a-half 30-day months. As noted in an earlier work,⁵² the genealogies of the sons of Noah conceal sums which preserve a sense of the *progression* of sacred calendrical intervals: Shem (the eldest son representing the measure enduring from the Sumerian fatherland) whose lineage extends 56 names – *ie*, the 56-year round of nodal regression; Japheth (middle son representing the measure *adapted* from both the Egyptian and Sumerian calendars) presiding over a line of 15 names – *ie*, the half-measure of the Egyptian 30-day month, which allowed the Isrælites to rationalize a solar year of 12½ lunar months; and Ham (youngest son, whose descendants identify him with Canaan) surveying a lineage of 29 names – *ie*, introducing the new or *youngest* Isrælite measure of the 29-day month. Lineages whose sum curiously totals 100 (56 + 15 + 29).⁵³

52 DRUMBOLIS, *God's Wand*, pp294/5

53 SHEM; Elam, Asshur, Arpachshad, Lud, Aram; Shelah; Eber; Peleg, Joktan; Reu; Serug; Nahor; Terah; Abram, Nahor, Haran; Ishmæl, Isaac, Zimram, Jokshan, Medan, Midian, Ishbak, Shuah; Nebaioth, Kedar, Adbeel, Mibsam, Mishma, Dumah, Massa, Hadad, Tema, Jetur, Naphish, Kedemah; Esau, Jacob; Eliphaz, Jeush, Jalam, Korah, Reuel; Reuben, Simeon, Levi, Judah, Issachar, Zebulun, Gad, Asher, Joseph, Benjamin, Dan, Naphtali [56] GENESIS X: 22–6; XI: 10–26

JAPHETH; Gomer, Magog, Madai, Javan, Tubal, Meshech, Tiras; Ashkenaz, Riphath, Togormah; Elishah, Tarshish, Kittim, Danaanites [15] GENESIS X: 2–4

HAM; Cush, Misraim, Put, Canaan; Seba, Havilah, Sabtah, Raamah, Sabteca, Nimrod; Lud, Anam, Lehab, Naphtuh, Pathros, Cusluh, Caphtor; Sidon, Heth, Jebusites, Amorites, Girgashites, Hivites, Arkites, Sinites, Arvadites, Zemarites, Hamathites [29] GENESIS X: 6–19

NOTE that these genealogies are confined to 'father, son and grandson' – a calendrical mnemonic for 'cycle, year and month' – and in the case of Shem (through whose line the Sons of Isræl descend) only those grandsons tracing that descent to Abram; Haran, the seventeenth name (17 being the number of downfall), appropriately signals a falling back to the *antecedent* measure of 'father, son and grandson' (the lines of Japheth and Ham notably *preceding* that of Shem, in the account in *Genesis*)

Recall that the initial Israelite eight-year cycle comprised 88 months of 29 days ($88 \times 29 = 2552$) plus 12 months of 30 days ($8 \times 1\frac{1}{2} \times 30 = 360$) or 100 months totalling 2912 days which would require the addition of at least 9 intercalary days per cycle to meet celestial alignment (2921.9376 days in 8 complete solar years or 2923.5282 days in 99 complete synodic months). Seven complete eight-year cycles further composed the 56-year cycle of nodal regression which was computed at 20,440 days – producing a round eight-year cycle length of 2920 days (eight days more than the initial Israelite 8-year 100-month measure).⁵⁴

Here, it is important to appreciate what such *calendrical* measures as the 8-year cycle (either the 100- or 99-month variant) were initially conceived to synchronize with: the 56-year rationalized round of nodal regression incorporating three 18.61-year *celestial* nodal cycles during which the moon returns to its original point of emergence on the horizon. An empirical measure of the course of the moon through her complete cycle, divined through *observation*.

Yet the number of days in the 18.61-year cycle of nodal regression is notoriously difficult to compute (as may be seen from the variable computations in the APPENDIX: 230 synodic months – 6792.0352; 18.61 round years – 6792.65; or 18 solar years plus 218.875 days – 6793.2346; which were rounded by the lunar priests to 6792 days).⁵⁵

Seven 100-month cycles extend 20,384 days; while seven 99-month cycles equal 20,447.⁵⁶ Yet 100 lunations extend 2953.0588 days; making seven 100-lunation cycles equal to 20,671.411 days.⁵⁷ While 99 lunations equal 2923.5282 days; or 20,464.697 days over seven 99-lunation cycles.⁵⁸ Which should illustrate that seven 99-month cycles (20,447) come

54 $20,440 \div 7 = 2920$ (cf. APPENDIX: '56-year cycle')

55 $230 \times 29.530588 = 6792.0352$; $18.61 \times 365 = 6792.65$;

$18 \times 365.2422 = 6574.3596 + 218.875 = 6793.2346$

NOTE rounded to 6792 because 230 lunations (6792.0352 days) and 18.61 years of 365 days (6792.65) converge at that point

56 $2912 \times 7 = 20,384$; $2921 \times 7 = 20,447$

57 $29.530588 \times 100 = 2953.0588 \rightarrow 2953.0588 \times 7 = 20,671.411$

58 $29.530588 \times 99 = 2923.5282 \rightarrow 2923.5282 \times 7 = 20,464.697$

closer to seven 99-lunation cycles (20,464.697) than the correlative seven 100-month cycles (20,384) approach seven 100-lunation cycles (20,671.411).⁵⁹ Seven cycles were focal to the calculations because both the computational 8-year calendar measure and the observed 18.61-year cycle of nodal regression would more nearly converge in the rationalized 56-year compound of three nodal-regression cycles than in any shorter full-year interval.⁶⁰

Not only did seven 99-month cycles (20,447) approach seven 99-lunation cycles (20,464.697) with greater fidelity than the 100-month measure, but it was also nearer to the rounded 56-year nodal measure of 20,440 days.⁶¹

To recapitulate, the genealogy of the ancestors of Abram encodes measures memorializing: [A] the 56-year lunisolar round of nodal regression (in the *eldest* son, Shem's line); [B] the new half-measure of the ancestral 30-day month (in the *second* son, Japheth's line); [C] the correlative new measure of the 29-day month (in the *youngest* son, Ham's line); [D] the 100-month measure (in the aggregate lines of the sons of Noah). Which were followed by: [E] Abraham's refinement of the more accurate 99-month 8-year measure (in his 99th year, after adding the eighth letter to both his *and his wife's* name – signifying a *second* 8-year measure); [F] the 19-year 235-month measure encoded in the Mosaic accounts (*ie*, the 470 years in Egypt and the wilderness – inviting *division*, for the *two* localities: $470 \div 2 = 235$).

A SUBSEQUENT CENSUS was taken by Moses and Eleazar (third son of Aaron) in the plains of Moab across from Jericho just before the sons of Israel crossed the Jordan into

59 $20,464.697 [2923.5282 \times 7] - 20,447 [2921 \times 7] = 17.697$
 $20,671.411 [2953.0588 \times 7] - 20,384 [2912 \times 7] = 287.411$

60 $7 \times 8 = 56$ [years]; $18.61 \times 3 = 55.83$ [solar years] or
 $7 \times 99 = 693$ [months]; $230 \times 3 = 690$ [lunations]
 [cf, $18.61 \times (5) 93.05$; (10) 186.1; (18) 334.98; (23) 428.03]

61 $6792.0352 \times 3 = 20,376.105$ [230 synodic months $\times 3$]
 $6793.2346 \times 3 = 20,379.703$ [(18 solar years + 218.875 days) $\times 3$]
 $6797.1573 \times 3 = 20,391.471$ [18.61 solar years $\times 3$]
 [cf, $2912 \times 7 = 20,384$ – seven 100-month cycles]
 $365 \times 56 = 20,440$ [rounded measure of days in a 56-year cycle]

Canaan. The number of males aged twenty or over totalled 601,730⁶² (a decrease of 1820 from the census undertaken by Moses and Aaron), while the Levites a month or older had increased (by 1000) to 23,000.⁶³ The ratio of Levites to the entire male populace was reduced as a result to 26-to-1.

The census of Levites between the ages of 30 and 50 fit to bear arms was not updated, however, suggesting that the measure preserved in the initial census (8580) would prove satisfactory for the new count as well. If the revision of the census encoded the improvement of the 8-year calendar from a 100-month to a 99-month measure, for instance, their common employment of variable 12-month and 13-month years would be accommodated by the sole census figure 8580.⁶⁴

The introductory census of 603,550 bears relation to the 18.61-year cycle of nodal regression (traditionally figured in a compound of three cycles producing a round sum of 56 years, to facilitate empirical measurement – as with the circle of 56 holes arguably employed as nodal-cycle year-markers during the earliest period at Stonehenge, broadly dated between 3000 and 2000 BC):

$$603,550 \div 20,440 = 29.527886$$

The nodal round of 56 years was computed at 20,440 days (365×56) – with the quotient established by this ratio approaching the length of a lunation.⁶⁵

I take the presence of the number 56 in ancient scripture as a signal figure of the recognition of the round of nodal regression. It appears twice in the Sumerian Kinglist: the reigns of Sharru-kîn and his grandson Narâm-Sin both prevailing, according to the record, for 56 years. Which proves significant for Abraham and his descendants in that

62 Reuben 43,730; Simeon 22,200; Gad 40,500; Judah 76,500; Issachar 64,300; Zebulun 60,500; Manasseh 52,700; Ephraim 32,500; Benjamin 45,600; Dan 64,400; Asher 53,400; Naphtali 45,400 [NUMBERS XXVI: 5–51] NOTE the positions of Manasseh and Ephraim have been cryptically reversed

63 NUMBERS XXVI: 62 (1820 = 364×5) [cf. p263]

64 $8580 \div 12 = 715$; $8580 \div 13 = 660$

65 synodic equivalent: 29.530588

Sharru-kīn or Sargon (r. ca 2334–2279 BC) was reputedly the first Semitic ruler of Mesopotamia.

What this may have meant at the time – given that the term *Semite* fails to distinguish ethnicity in a population and that the linguistic distinctions failed to absorb the official language of Sumeria – might have had more to do with the refinement of *a new order of measure*. Such as the cycle of regression of the nodes.

The introduction of new measures of time threatens the routines and rituals of a populace, and is frequently characterized as revolutionary or cataclysmic.⁶⁶ Sumerian Kinglist figures represent three divergent tabulations of regnal measurement, as I have shown, with calibration required for two of the measures, based on their methods of counting.⁶⁷ Knowing what a count delimits refines the focus of its figures – the number 56 in a list, for instance, meaning little to someone oblivious to the cycle it might portend. Which becomes a more glaring miscalculation the more the *lunar focus* of Sumerian culture is reconsidered.

The record of these Accadian rulers harbours a number of highly suggestive details. Sargon – “King of Akkad, the *mashkim* of Inanna, the King of Kish, the *guda*-priest of An, the king of the Land, the great *ensi* of Enlil”⁶⁸ – was raised by Akki, “the drawer of water” (*cf.* Okeanos) after his virgin mother who gave birth to him in secret set him adrift “in a basket of rushes, with bitumen she sealed” on the river Euphrates.⁶⁹ Details which recur in the narrative of the birth of Moses who was hidden for three months before his mother “got a papyrus basket for him; coating it with bitumen and pitch” and set him adrift “among the reeds at the river’s edge”. Pharaoh’s daughter named him Moses because she “drew him [*cf.* Akki] out of the water”.⁷⁰

66 “To carry out the reformation of any long established calendar is, we know, not a trifling undertaking. Even on secular grounds, any proposed reform encounters strong opposition.”

[PLUNKET, *Calendars & Constellations of the Ancient World*, p15]

67 DRUMBOLIS, *God’s Wand*, pp260–89

68 KRAMER, *The Sumerians*, p324

69 ROUX, *Ancient Iraq*, p145

70 *mashah* means “to draw out”; *cf.* *mashkim* [EXODUS II: 2–10]

It bears noting here, that the story conceals allusions to the lunar cycle: virgin birth describing the mystery of the rebirth of the moon, the waxing crescent begotten on the mirror-image of her waning mother without a detectable copulant; the moon hidden for three days while it crosses the underworld ocean (the *Tuat*) in a basket (a crescent) sealed with the bitumen-black pitch of night. The Mosaic narrative suggests his association with the 19-year Metonic *phase* cycle of 235 lunations (*cf.* 470 years of Isrælite absence from Canaan); a measure arguably refined from the slightly shorter 18.61-year *course* cycle of nodal regression compounded in the 56-year reigns of Sargon and his grandson – the two focal lunar cycle measures of antiquity.

Sargon or Sharru-kîn ('the righteous or true king') ruled for 56 years according to the Sumerian Kinglist⁷¹ (*ca* 2334–2279 BC) and managed to extend the Akkadian kingdom beyond Mesopotamia.⁷² "His influence made itself felt in one way or another all over the ancient world from Egypt to India."⁷³ Succeeded by sons Rimush (whose 'servants killed him with their tablets' in 2270 BC) and Manishtushu who endured on the throne for 15 years (2269–2255 BC) Sargon appears to have overthrown the old order (King of Kish, Ur-Zababa; followed by Overlord of all Sumer, Lugal-zagesi) and arguably introduced radical new measures. This suggestion is sustained by details of his grandson, the incomparable Narâm-Sin's rule.

Son of Manishtushu, Narâm-Sin ('beloved of moon-god Sin'), is credited in the Sumerian Kinglist with a reign of 56 years like his illustrious grandfather – the only two reigns of this duration in the entire list. That one 'beloved' of the moon-god enjoyed a reign the length of the most complex lunar measure in antiquity, is at least remarkable.

⁷¹ KRAMER, *The Sumerians*, p330

⁷² "We can accept successful campaigns in Kurdistan and perhaps expeditions on the Persian Gulf as far as Oman, but can we really believe that Sargon 'crossed the Sea of the West' and set foot in Cyprus and Crete, as an omen and a rather obscure geographical list would suggest?" [ROUX, *Ancient Iraq*, p148]

⁷³ KRAMER, *op cit*, p59

As Gerald Hawkins has shown, the 56-year lunar measure of nodal regression was recognized at least as early as the third millennium BC when lunar priests constructed a circle of 56 holes on the Wiltshire plain at Stonehenge, to keep track of their place in the cycle.⁷⁴ Jaquetta Hawkes confirms evidence of westward exploration for fresh sources of tin during “late Sargonid times”⁷⁵ after “all the easily accessible sources of stream tinstone had been exhausted” – Britain subsequently supplying most of the tin for the European Bronze Age from her mines in Cornwall not 100 miles from Stonehenge. While Georges Roux, as cited, is *arrested* by a reference in an omen text, to Sargon’s voyage past the ‘Sea of the West’ to Crete.

Narâm-Sin beat back incursions on his grandfather’s vast empire, which had steadily accumulated throughout the weaker reigns of his father and uncle. “Narâm-Sin was of the same stamp as his grandfather Sargon and like him became a hero of legend. His long reign (2254–2218) [*sic*] was almost entirely filled with military operations, and they all took place at the periphery of Mesopotamia.... To the title of ‘King of Agade’, he could proudly add those of ‘King of the Four Regions (of the World)’ and ‘King of the Universe’. Furthermore, his name was preceded by the star, the ideogram for ‘god’, read in Sumerian *dingir*, in Akkadian *ilu*. Thus the king had become a god, like Lugalbanda and Gilgamesh.... But we must confess that the deification of a *limited number* of monarchs in ancient Mesopotamia is a strange practice not yet fully understood.”⁷⁶

Samuel Kramer details a few of his military successes: “he defeated a powerful coalition of rebellious kings from Sumer and the surrounding lands; he conquered the region to the west as far as the Mediterranean Sea and the Taurus and Amanus ranges; he extended his dominion into Armenia and erected his statue of victory near modern Dierbakir;

74 HAWKINS, *Stonehenge Decoded*, pp176/7

75 HAWKES, *The First Great Civilizations*, p109

76 ROUX, *Ancient Iraq*, p150 (emphasis added)

NOTE the Kinglist is clear: “Narâm-Sin, the son of Manishtushu, reigned 56 years” [KRAMER, *The Sumerians*, p330]

he fought the Lullubi in the northern Zagros ranges and commemorated his victory with a magnificent stele; he turned Elam into a partially Semitized vassal-state and constructed numerous buildings in Susa; he brought booty from Magan after defeating its king Manium, whom some scholars have identified with the renowned Menes of Egypt. No wonder that he felt himself powerful enough to add the epithet 'King of the Four Quarters' to his titulary and that he was presumptuous enough to have himself deified as 'the god of Agade.'⁷⁷

Narām-Sin had extended his influence beyond Sumer to the Mediterranean (encompassing Canaan); into Anatolia (past the city of Haran,⁷⁸ temple-centre of moon-god Sin where Abram settled after leaving Ur); adjacent Armenia (and Mt Ararat); Iran from the Caspian to the Persian Gulf (Susa in Elam); and arguably Egypt. An influence which not only involved worship of the moon-god Sin but also recognition of the king himself as god.

A new god in the land of Canaan: precisely what Abram introduced! The scriptures reveal that the new god did not divulge his true name to Abraham, Isaac or Jacob leaving them with the salutation of El-Shaddai (god-almighty);⁷⁹ while Melchizedek the king and high priest of Salem who blessed Abram in the name of his 'most high god' prayed to El-Elion.⁸⁰ These Elohim represent elaborations of the old god El (later Bel), who was worshipped in Sumeria as Enlil, god of the air – one of four elemental creator gods, with An (sky), Ki (earth) and Enki (water). The scriptures arguably preserve a memory of the introduction of a new

⁷⁷ KRAMER, *The Sumerians*, p62

⁷⁸ "Haran is referred to in texts from the Ur III period *ca* 2000 BC as a temple for the worship of Sin the moon-god, and its occupation is confirmed by archaeological evidence." [New *Bible Dictionary*, p453]

⁷⁹ "God spoke to Moses [in Egypt] and said to him, 'I am Yahweh. To Abraham and Isaac and Jacob I appeared as *El-Shaddai*; I did not make myself known to them by my name Yahweh.'" [EXODUS VI: 2/3] NOTE Moses, then 80, died at 120

⁸⁰ GENESIS XIV: 18–20; NUMBERS XXIV: 16 – the oracle of Balaam for Balak king of Moab, in which *Shaddai* and *Elion* both figure

god into Canaan who was initially known by a compound of his old familiar name during the earliest period, before the new name replaced it.

Barbara Walker – citing the 1927 study by Robert Briffault, *The Mothers* VOL III, p108 – identifies Abraham with Sin, moon-god of the Babylonians, and root of Mt Sinai where the new god of Abraham first revealed himself to Moses. Sin was the son of the “Virgin Queen of Heaven,”⁸¹ Nanna” – which is echoed in the legend of Sargon’s virgin birth. “Very ancient documents used the name Abraham or Abram as a synonym for Ab-Sin, Moon-father.”⁸²

The Burning Bush which was not consumed, from which Yahweh spoke to Moses,⁸³ represents the lunar cycle: its phases differently-articulated branches of a common plant; the fire signifying ‘radiance’ which does not consume its host; the tree- or bush-metaphor for lunar cycle later adapted to the tree-alphabet described by Robert Graves⁸⁴ (the original alphabet configured as a serial *depiction* of lunar phases).⁸⁵ The staff of Moses turning into a serpent then back into a staff, signifies the measure by his rod of a snakelike phenomenon – the lunar course cycle describing a pronounced slither (or alternately high/low rising/setting amplitude) through the night sky. A rod by which Moses and Aaron were empowered to “perform *the signs*” (*ie*, protract the alphabet). The hand (connoting ‘measure’) covered with leprosy “white as snow” when extracted from the bosom of Moses, refers to the white face of the moon eaten away during the waning half-cycle; its restoration secured after a *second* emergence from the “bosom” or underworld (a face waxing a ‘finger’ a night on its re-emergence). While Mt Sinai “the mountain of God” (moon-god Sin) looms over “the far side of the wilderness” (or underworld).⁸⁶

81 “In ancient Uruk, the name of Nana meant ‘Moon.’” [WALKER, *The Woman’s Encyclopedia of Myths and Secrets*, p717]

82 WALKER, *op cit*, p940

83 EXODUS III: 2

84 GRAVES, *The White Goddess*, pp168–214

85 DRUMBOLIS, *God’s Wand*, pp84–94; *God’s Shadow*, pp24–6

86 EXODUS III / IV

Sin the moon-god, son of Nanna the moon-goddess, has a counterpart in this figurative deconstruction of *Exodus*, in the spectre of Nebo son of Bel, with whom the mountain on the other side of the wilderness (from which Moses had his glimpse of the new god's view of the Promised Land before he died), is cryptically identified in the scriptures. Two mountains identified with the sons of the dominant gods of the old measure, securing opposing banks of the underworld (wilderness). Twin peaks into which Moses ascended to alternately begin and end his divine mission – a figurative parenthesis of the Mosaic 'deliverance'.⁸⁷

Twin peaks originally conceived as the terminals from which the divine realm of the gods – the twin streams of Okeanos – was suspended: one holding the heavens up, the other keeping the waters of the underworld down. Sin and Nebo, both sons of the old measure – the new measure expressly fathered by the old (*ie*, adapted not eclipsed). A father-figured advancement, like that of Abraham.⁸⁸

87 Moses dies at 120 on Mt Nebo 30 days before Joshua and the Sons of Israel cross into Canaan – all but two of those who left Egypt 40 years earlier dying in the wilderness (*ie*, the 30-day calendar of the old order had to be interred before their new revolutionary measure could be imported). Nebo (Babylonian Nabû, god of learning, writing, *astronomy* and science) was the son of Bel, supreme god of the old order. Moses was permitted by Yahweh to survey the Promised Land from the heights of Nebo before he died (*ie*, the prophet of the old measure had arrived at his 'vision of a new order' through the application of *astronomical* learning on high). The two originals who crossed the river Jordan (*cf*, the underworld stream of Okeanos) into Canaan – Joshua and Caleb – represent the two dark nights without a visible moon in the sky, which remained the ancestral foundation of the lunar count of all priestly measures.

88 "The etymology of the name Abram (Hebrew *'abram*; used in GENESIS XI: 26 – XVII: 4 and rarely elsewhere) is uncertain.... After the covenant of GENESIS XVII: 5 his name is changed to Abraham (*'abraham*) and explained as 'father of a multitude' of nations. Both these name forms occur in cuneiform and Egyptian texts from the 19th century BC onwards, but not as identical persons. The latter form, possibly as popular etymology, is generally considered a dialectal variant of Abram, though a *distinct new name is implied* (which may incorporate an early form of Arabic *rh*m = 'multitude')." [*New Bible Dictionary*, p5]

Ab-ram a synonym for Ab-Sin, meaning “Moon-father” according to Robert Briffault. Yet Sin had no father, being born to the Virgin Queen, Nanna. Sin (Zion) “was the god who received the Tablets of Law from the primal Mother of Creation, Tiamat”.⁸⁹ In other words, Sumerian moon-god Sin (son of Nanna), got the laws from the Babylonian mother-goddess of the universe, Tiamat (mother of Bel) – associating Sin and Nebo (through Bel) with the sacred insights of the universe, long before the narrative of Moses would condescend to ‘bridge’ their eponymous peaks.

Ab-Sin figured as ‘father-moon’, however, might signify a faction of lunar priests who introduced a calendar refined from an antecedent measure, which greatly improved the fidelity of lunisolar rationalization. The echo of Sargon’s influence in India summoning the conspicuous resonance of ‘Abraham’ in ‘Brahma’ to support a theory of Sargonid diffusion.

Yet Sargon was not perceived as the god his grandson was – Narâm-Sin, sovereign of the four regions of the world, who introduced a new god to the compliant subjects of his vast empire. Narâm-Sin, King of Agade, King of the Four Quarters of the Earth, King of the Universe, whose reign like that of his grandfather, lasted an astronomical 56 years. Narâm-Sin, whose name curiously incorporates *both* of the suffixes completing the earliest variants of the name of Abraham (who also introduced a new god into Canaan): *Ab-ram* and *Ab-Sin*.

89 WALKER, *The Woman’s Encyclopedia of Myths and Secrets*, p940
NOTE the resemblance to the Tablets of the Decalogue at Sinai conveying the laws to Moses (whose abandonment in a basket on a river recalls the childhood of Sargon whose birth from a virgin mother recalls that of Sin). The insights conveyed by Tiamat the Mother Goddess may be gleaned by recognizing the origin in her name of the term ‘diameter’ – the source of all insight into lunar cycle and linear measure resulting from the ancient determination to rationalize diameter and circumference of the circle (incited initially by the enigmatic spectre of the half-moon). She gave birth to the entire universe by *separating* the heavens from the underworld. And Tiamat’s son Marduk, the Babylonian god Bel, fathered Nebo (namesake of the antipodal peak of the Mosaic circuit of her *divided* realm).

‘Sargon’ is notably cognate with ‘Serug’, great-grandfather of Abraham. And Narâm-Sin, according to a Sumerian poem entitled ‘The Curse of Agade: The Ekur Avenged’, is recorded as having desecrated and defiled the sanctuary of Enlil at Nippur, provoking eight other dominant Sumerian gods to invoke the imminent destruction of his city-seat of Agade in retribution.⁹⁰ Which seems to confirm that after Narâm-Sin had installed himself as the new god, the old order of Enlil or Bel was not only superseded but assailed beyond the limits of ‘brotherly’ latitude – provoking a rebellion among the priests of the traditional measure.

THE BABYLONIANS, according to Emmeline Plunket,⁹¹ had employed the same calendar throughout antiquity; but Willy Ley⁹² has recognized that the Chaldeans *adopted* improvements when possible. Initially a tribe from Ur, the Chaldeans (who ruled Babylon after the Assyrians, until their defeat by the Persians under Cyrus, 539 BC) later came to assume the dimensions of Court astronomer, astrologer, magi or seer. David Duncan⁹³ qualifies things

90 KRAMER, *The Sumerians*, pp62–6

91 “The astronomical and astrological texts drawn up for Sargon of Accad are entitled *The Illumination of Bel*, [TRANSACTIONS OF THE SOCIETY OF BIBLICAL ARCHÆOLOGY, 1874, pp150/1] and still as late as the second century BC, all Babylonian almanacs bore the heading: ‘At the command of my Lord Bel and my Lady Beltis, a decree’. Thus it was, we may suppose, that under the protection of the gods the Accadian calendar continued unchanged throughout all the changing ages.” [PLUNKET, *Calendars and Constellations of the Ancient World*, p16]

92 “Beginning in 530 BC [the Chaldeans] used the 8-year period; a century later the superior 19-year period was introduced and was used exclusively from 380 BC.” [LEY, *Watchers of the Skies*, p9]

93 “The Sumerians by the twenty-first century BC had developed a slightly different system founded on a calendar year of 360 days. This came from rounding off the lunar month to 30 days, which fit neatly into the Sumerians’ mathematic and astronomic system. This system is based on the numbers 6 and 60, which equal 360 when multiplied – the number we still use to divide the sky and every calendar plane. No one knows why the Sumerians and later the Babylonians chose these numbers, though 4000

by crediting them with the discovery of the 19-year cycle; while Duncan Steel, who likewise sees the Babylonians as its architects, claims that the Jews brought it back with them after the Babylonian Exile (532 BC) – 100 years before Meton would introduce it to Greece.⁹⁴

This impression, however, that the 19-year calendar of the Hebrews was the same as that employed by the Greeks and the Babylonians, in my opinion, confuses the sequence.⁹⁵ Jotham Johnson contended that the 19-year measure, “put into operation in Babylonia not later than 367 BC” was soon adopted as the calendar of the Seleucid Empire in Mesopotamia and Syria (312 BC) and sometime after by

years later they remain the numeric basis for everything from determining one’s position at sea to the location in the sky of a distant galaxy vis-à-vis the earth.” [DUNCAN, *Calendar: Humanity’s Struggle to Determine a True and Accurate Year*, p15]
 “Sometime around 432 BC Babylonian mathematicians figured out that seven years of 13 lunar months followed by twelve years of 12 lunar months would equal almost exactly 19 solar years.” [DUNCAN, *op cit*, p14]

- 94 “In chapter 5 we met the Metonic cycle of nineteen years, and I noted that the Babylonians appear to have anticipated this discovery some time before Meton. It seems that the Jews calculated their lunisolar calendar using this nineteen-year cycle inherited from the Babylonians: they brought it back with them when they returned to Judæa and Egypt after the Exile.”

[STEEL, *Marking Time*, p39]

- 95 “There was an early evaluation of 360 days in a year, which was soon recognized to be incorrect, but one can see how confused they might have been: 360 is five or six days longer than the approximately 354 occupying twelve lunations, but also five or six shorter than the seasonal cycle. In the end the Babylonians bowed to the Sun, recognizing that the year was about 365 days long on average, and so arranged a calendar such that many years contained twelve lunar months totaling 353, 354, or 355 days, and every so often, a thirteenth (intercalary) month was inserted making a year lasting 383, 384 or 385 days. The actual length would depend upon the varying numbers of days between new moons. The Hebrew calendar used today is very similar to this, with Deficient (353-day), Regular (354-day), and Complete (355-day) years, each increased by 30 days in a Leap (thirteen-month) year; this is why the date of Hanukkah jumps around so much on the Western calendar.” [STEEL, *op cit*, p39]

the Parthian dynasty in Persia (third century BC) from whom it was ultimately conveyed to the Han dynasty of China.⁹⁶ The 19-year Jewish calendar in use today – with “the first and thirtieth days being called new-moon” – was established considerably later by Hillel II (303–65 AD),⁹⁷ around 359 AD. Whereas the Babylonian 11-year calendar appears to have been refined from the Metonic calendar sometime after its adoption as the official measure of the Seleucid Empire (312 BC).⁹⁸

MANIUM KING OF MAGAN – conquered by Narâm-Sin – has been identified, as noted, with Menes of Egypt; a bold conjecture given the apparent discrepancy in their dates.⁹⁹ Which suggests that these historians see some reason in disputing the conventionally-accepted time when Menes is purported to have ruled.

The Kinglist in the temple of Seti I (*ca* 1305–1290 BC) at Abydos begins with the name of Meni, the first pharaoh and legendary founder of the First Dynasty (rendered as

96 ENCYCLOPEDIA AMERICANA VOL V, p191

97 ENCYCLOPEDIA AMERICANA VOL XVI, p59

98 Given the established intercourse between the Egyptians and the Greeks from the time of Solon (*ca* 640–558 BC); the report of the Egyptian ‘360-plus-5-day’ civil measure by Herodotus (*ca* 480–425 BC); the date of Meton’s introduction to Greece of the 19-year calendar (432 BC) – with a month two minutes longer than an average lunation; the improved 76-year measure of Callipus (330 BC) – with a month just 22.7 seconds longer than an average lunation – a year after Alexander’s conquest of Egypt (331 BC); and the further improvement of the 304-year measure of Hipparchus (150 BC) – with a month only ¼-second short of an average lunation; it would appear that the 11-year 136-month measure of the Babylonians (with a month one minute and 42 seconds short of an average lunation) developed after their adoption of the 8-year (530 BC) and 19-year (367 BC) cycles – arguably by subtracting the first (a month 36 minutes 47 seconds shorter than an average lunation) from the second (the month two minutes longer than an average lunation): $19 - 8 = 11$; $235 - 99 = 136$. The month of the 11-year cycle was closer to an average lunation (–102 seconds) than that of either the 8-year (–2207 seconds) or 19-year (+120 seconds) cycle.

99 Narâm-Sin (*ca* 2254–2198 BC); Menes (*ca* 3100 BC)

Menes in the Kinglist of Manetho, third century BC).¹⁰⁰

Barbara Walker disputes the conjecture that Menes was a pharaoh because “the hieroglyphic symbol of Mena means both ‘moon’ and ‘milk-giving mother’s breast,’ improbable symbols for a male”. She goes on to associate the name with that of Menos, the Egyptian moon-goddess “credited with the invention of hieroglyphic writing” who presided over “the first mother-city of Egypt”; Men-nefer (‘beautiful moon-virgin’; later called Memphis), “seat of first-dynasty rulers” in Khemennu (‘land of the moon’; subsequently known as Upper Egypt).¹⁰¹

Gender aside, this earliest dynastic ruler of Egypt was unmistakably associated with the moon. His seat of the ‘beautiful moon-virgin’ summons the memory of Nanna Virgin Queen of Heaven, the Sumerian moon-goddess and mother of moon-god Sin – which in turn recalls the virgin birth of Sargon. And Sargon’s celebrated grandson Narâm-Sin (‘beloved of the moon-god Sin’) – who extended the Akkadian Empire to the Mediterranean and into Magan, the realm of King Manium (whom some think was Menes) – has a name so similar to Narmer, the other name or title Menes is known by, as to render the common derivation of those names (Menes and Sin: both focal moon deities) the mitigating factor behind the theory that the Egyptians of the early thirteenth century BC may have memorialized the great Sumerian emperor as their divine progenitor, in heading their Kinglist with the name of Meni.

The name ‘Narmer’ is incised at the base of an alabaster statue (*ca* 2950 BC) between the feet of the sacred baboon “known as the ‘Great White One’ [who] was succeeded by the baboon-god Thoth in historical times”.¹⁰² Thoth, like Menos (or Nebo son of Bel), is credited with the invention of script – his name resounding the letter *theta* or *teth* which symbolizes the half-moon visible on the tenth day (that seminal celestial phase from which both ‘measure’

100 WESTENDORF, *Painting, Sculpture and Architecture of Ancient Egypt*, p180

101 WALKER, *The Woman’s Encyclopedia of Myths and Secrets*, p632

102 WESTENDORF, *op cit*, p23

and ‘script’ were conceived – from the determination to rationalize the diameter and circumference of the implicit figure of a full circle). A *white* baboon to signify the moon; Mena’s ‘milk-giving breast’ proffering the figurative half-moon which secretes the most divine nourishment through an appreciation of lunar cleavage (*ie*, complementary half-moons parenthesizing a cycle of waxing and waning phases, joined at the full moon – comprised of opposing halves).

Failure to recognize that the term ‘Narmer’ presents a metathesis of the prefix in the titular ‘Narâm-Sin’ has allowed the ludicrous transliteration “sheatfish-chisel”.¹⁰³ The nature of Narmer represented in the Egyptian king-list, however, is that of a divine king – without ancestors – a godlike presentiment, from whom an entire people spring. Which is consonant with conquest by Narâm-Sin, God of the Universe, who introduced the new 56-year measure (or ‘multitude’ of *Ab-rhm*) to the incumbent lunar priesthood.

Narmer and Narâm-Sin, distinguished lunar dignitaries alike; which further accords with the character of Abram. “Not surprisingly Sanliurfa [Urfa, Turkey – an hour drive from Haran] is rife with legends about Abraham. One says he was born in a cave at the foot of a rock outcrop in the southern part of the city. According to this tale Abraham aged a *month* on the first day after his birth and turned 12 on his first birthday.”¹⁰⁴ Equating Abraham with the moon (the *month* his measure, of which there are 12 in a year). Which further compounds the significance of his father’s name, Terah: “Hebrew *terah* is usually taken as connected with the moon-god and compared with Turahi, a place near Haran”.¹⁰⁵

Terah is the ninth patriarch in the lineage of Shem; while Abram’s is the fifteenth name.¹⁰⁶ The ninth night (or tenth

103 WESTENDORF, *Painting, Sculpture and Architecture of Ancient Egypt*, p25

104 SZULC, ‘Abraham: Journey of Faith’, NATIONAL GEOGRAPHIC VOL CC NO 6, p110 (the denizens believing Ur signifies Urfa)

105 *New Bible Dictionary*, p1175

106 SHEM; Elam, Asshur, ARPACHSHAD, Lud, Aram; SHELAH; EBER; PELEG, Joktan; REU; SERUG; NAHOR; TERAH; ABRAM

day) of a lunation harbours the half-moon; the fifteenth day ushers in the full moon.

36 The inclination to equate legendary figures of antiquity (such as Menes; and Abram – about whom no mention is made outside of the Bible)¹⁰⁷ with Sargon or his grandson, is further encountered in the case of Nimrod, enigmatic son of Cush.¹⁰⁸ He has been compared with Sargon “the great warrior...[who] led expeditions to the Mediterranean coast and into S Anatolia and Persia, and the splendour of his age and achievements led to its being recalled as a ‘golden age’. Since only the throne-name of Sargon is known, it is possible that he bore other names. Others see in Nimrod exploits attributed to such early rulers as Narâm-Sin of Agade.”¹⁰⁹

Apart from the obvious similarity in the names ‘Nimrod’ and ‘Narâm-Sin’ (not to mention ‘Narmer’), the impression that he was the founder of Nineveh and Assyria lends to the supposition that Nimrod may be equated with Ashur,

107 “It is extremely difficult to obtain independent evidence as to the historicity of *Genesis*, since many of the narratives have no parallel in non-biblical literature.” [*New Bible Dictionary*, p413]

“And the Egyptian evidence of the Exodus, the years in the wilderness, and the Conquest? The archaeological evidence? Absolutely none. No independent mention of a nation on the move, of a pursuit, of any cataclysm, of Irælite armies active in Canaan. No trace of a nation living in Sinai, let alone for the Biblical forty years, nor of the destruction in the very cities supposedly ravaged by Joshua.” [MAN, *Alpha Beta*, p133]

“It is interesting to notice that the prophets of this period [pre-exilic period before 587 BC] do not even mention the migration of Abraham, as related in *Genesis* 12. Instead they trace Israel’s historical beginning to the time of the Exodus and the sojourn in the wilderness.” [ANDERSON, *Understanding the Old Testament*, p8]

108 “Cush became the father of Nimrod who was the first potentate on earth. He was a mighty hunter in the eyes of Yahweh, hence the saying, ‘Like Nimrod, a mighty hunter in the eyes of Yahweh.’ First to be included in his empire were Babel, Erech and Accad, all of them in the land of Shinar. From this country came Ashur, the builder of Nineveh, Rehoboth-ir, Calah, and Resen between Nineveh and Calah (this is the great city).” [GENESIS x: 8–12]

109 *New Bible Dictionary*, p836

the eponymous god of Assyria (*cf.* Narâm-Sin, the new ‘God of Agade’ and ‘God of the Universe’). And later the “land adjacent to Assyria” (*ie.* Canaan) came to be known as the ‘land of Nimrod’. The name ‘Cush’, in this reflection, appropriately echoes that of Sargon’s son Manishtushu, father of Narâm-Sin.

The possibility that the Hebrew scriptures have preserved a memory of Sargon (in Serug, Abram’s great-grandfather) garners further reinforcement from his successor Nahor (Abram’s grandfather) whose name is cryptically cognate with that of Narâm-Sin: Mt Sinai – which is also referred to as Mt Horeb¹¹⁰ – inviting the association of Na-Hor and Na-[râm]-Sin. A genealogy which appears to trace a line from Narâm-Sin of Agade to Narmer of Egypt and Ab-Sin or Ab-ram of the Israelites.

A line which it has yet to be recognized, may in fact simply preserve disparate memories of the same seminal figure: the illustrious King of the Four Quarters and supreme God of the Universe, Narâm-Sin.

THE EXPLOITS OF ABRAHAM, however (memorialized more than a thousand years after the reign of Narâm-Sin), present an *extrapolation* of the measures introduced from Mesopotamia. Narâm-Sin diffused the 56-year measure of nodal regression originally endorsed by his grandfather, to the four corners of his empire (the circle of 56 Aubrey holes at Stonehenge constructed at this time).

The legends of Narmer (the Egyptian recollection of Narâm-Sin), confirm the introduction of a new order into Egypt from which successive dynastic rulers were descended. The new calendrical measure included a 360-day year with five intercalary days (like the Sumerian); while Narmer’s mace-head preserves a number (1,422,000) which not only harbours an early measure of ‘pi’ ($1,422,000 \div 3.16 = 450,000$)

110 “Moses was looking after the flock of Jethro [identified earlier as Reuel — EXODUS 11: 18], his father-in-law, priest of Midian. He led his flock to the far side of the wilderness and came to Horeb, the mountain of God [*footnote:* Sinai; the alternative name used in the ‘Elohistic’ tradition].” [EXODUS 11: 1]

but also conceals a cycle of 3950 circuits ($1,422,000 \div 360$).¹¹¹ Which further embraces 70.5 nodal regression rounds of 56 years¹¹² – or 70 rounds (3920 years) plus 30 years – where the circuit completes a year of 365 days. While the number 3950 axiomatically represents the product of 3.16 and 1250.

But the measure of Abram deviated from the antecedent introduced by Narâm-Sin or Narmer, incorporating such innovations as the 364-day 52-week year (a 7-day week); a 29-day month; the half-month measure of thirty days; the $12\frac{1}{2}$ -month year;¹¹³ and the new 8-year 99-month calendar of 29- and 30-day months (congruent with the antecedent 56-year round of nodal regression). His descendants further appear to have refined the value of ‘pi’ (3.139) and later to have recognized the improvement of the 19-year cycle.¹¹⁴

It seems, in otherwords, as though the scriptures about Abraham, Moses and the Sons of Israël were constructed to memorialize a lineage of lunar measures introduced by Narâm-Sin of Agade, which were refined in Egypt by a sect of lunar priests forced to remove to distant lands once their innovations began to threaten the status quo of the prevailing Egyptian measure of two *separate* calendars.¹¹⁵

111 the secretion of π (3.16) in the number 1,422,000 identifies it as a measure of circumference ($\pi d = c \rightarrow 3.16 \times 450,000 = 1,422,000$; with diameter 450,000) – the modular measure of circumference (360°) inviting the division ($1,422,000 \div 360 = 3950$) – which in turn surrenders a ratio for π ($450,000 \div 360 = 1250$) \rightarrow [or $9 \times 50,000 \div 360 = 1250$] $\rightarrow 3950/1250 \rightarrow 79/25 = 3.16$

112 $3950 \div 56 = 70.535714$

113 11 months of 29 days (319) plus $1\frac{1}{2}$ months of 30 days (45) = 364

114 $(430 \times 365) 156,950 \div 50,000 = 3.139$ (bondage interval)
 $470 \div 2 = 235$ (‘Metonic’ bondage and wilderness cipher)

115 “In the same way as our calculation of the date of Easter stems in part from an original need to provide a full moon for pilgrims traveling to Jerusalem, for their festivals the Egyptians needed to consider the phases of the Moon. This led to a parallel lunar calendar being used, based on a cycle containing a certain number of lunations (durations of 29.5306 days). Because of their nonastronomical year of precisely 365 days, the sums are quite simple. A period lasting 309 lunations is on average just an hour short of 9125 days, and that is divisible by 365, providing a cycle of 25 years.” [STEEL, *Marking Time*, p45]

Not a distinct *people*, but a revolutionary sect of Egyptian (fundamentally Akkadian) lunar priests.

Even if the figures preserved in the book of *Numbers* were to be taken literally, assimilation after a period of 430 years (or 21 generations) in any fastness, presents an increasingly corrosive force against remaining distinct – particularly as the ‘covenants’ of Abraham, Isaac and Jacob appear to have lapsed sufficiently during the Egyptian bondage, to require a new Covenant with Moses *following* the Israelite Exodus. In other words, that which rendered Abraham and the Sons of Israel distinct appears to have receded far enough into the distant memory of their descendants to have grown inert.

As the records show, Narâm-Sin conquered Canaan and the adjacent lands (likely including Egypt); while Narmer, as the legends relate, appears to have come from elsewhere to unite Egypt (no ancestors). Complementary memories of outside influence, with both figures identified as gods. And the new god of Abraham and Moses likewise watched over his followers in Egypt who similarly originated elsewhere. A new god *introduced into Egypt from without*, who in one instance spearheaded conquest of Egypt; in another established a new line of Egyptian rulers; and in the third rendered his Egyptian followers ‘spiritually’ pre-eminent.

Supremacy, however, which might just as readily refer to advanced insights into celestial mechanics they had ‘divined’: a measure of lunar cycle which managed to improve upon the great discovery of their ‘legendary’ progenitor – the new God of the Universe from Agade – allowing them to ‘read’ God’s signals on high with even greater precision.

Biblical scholars agree, as has been shown (p7), that the use of the term ‘Sons of Israel’ in the scriptural account of the Mosaic census could not possibly refer to people – that is, unless the modifying figures are either wrong or require some sort of adjustment. As I have demonstrated, figures such as the sum of first sons (22,273) and Levites (22,000) conceal *calendrical* coefficients (p10ff). While the puzzle of the decreased numbers in the overall census of Israelites from the beginning (603,550) and end (601,730) of the sojourn in the wilderness, ‘conveniently’ confirms that the

epithet ‘Sons of Israel’ in this case contrasts two distinct *measures of time*, when subjected to the corresponding calendrical divisors.¹¹⁶ In other words, the Exodus account was conceived to preserve the memory of a progression not from land to land, but from the antecedent 365-day solar calendar (with 12 months of 30 days plus 5 intercalary days), to the new improved 364-day lunisolar measure (of eleven 29-day months plus 1½ thirty-day months – with 52 weeks of 7 days) – a measure compounded to produce the 8-year 100-month calendar, requiring an intercalation of 10 days every eight years (instead of 5 every year).¹¹⁷

Just as the calendrical mnemonic of the New Testament advances the figure of Christ as the moon (rising from ‘the dead’ – *ie*, in the west – on the third day, like the waxing crescent, to effect the Resurrection); emerging from the divine waters of Okeanos to his ‘ministry’ (*ie*, baptism or ‘submergence in the sacred waters’ prefiguring his ministry the same way that lunar ‘confinement’ in the underworld introduces the divine lunar cycle); enduring his epiphany at 30 (lunar measure) followed by a ‘ministry’ of 3 years: waxing crescent/full moon/waning crescent; and his holy ‘apostles’ figured as ‘boats’¹¹⁸ or months bearing the moon through its circuit of the year; so too Abraham and Isaac (each with ‘one light and one dark son’: day and night) give rise to a calendrical mnemonic advancing Jacob as the new moon (the ‘third generation’ representing the appearance of the new moon on the third night of lunar cycle; Israel representing a *new measure* of lunar cycle) with his 12 sons (by 4 ‘women’ or seasons: *Leah* a metathesis for *Rachel*; and *Billah* / *Zilpah* ringing resonance – indicating waxing, or spring/summer; and waning, or fall/winter, counterparts) as the means of ‘bearing him’ through the celestial waters

116 $603,550 \div 365 = 1653.5616$

$601,730 \div 364 = 1653.1043$

$(603,550 - 601,730) 1820 \div 364 = 5$ [cf. p263]

117 $(8 \times 11 \text{ months of } 29 \text{ days}) 88 \times 29 = 2552 \text{ days}$

$(8 \times 1\frac{1}{2} \text{ months of } 30 \text{ days}) 12 \times 30 = 360 \text{ days}$

$2552 + 360 = 2912$

$8 \times 365.2422 = 2921.9376 \text{ days}$ (solar equivalent)

118 ‘apostle’ (Greek) meaning “fleet” [New Bible Dictionary, p59]

for a year; the half-tribes of Manasseh and Ephraim adding the critical measure of a half-month to rationalize lunar and solar cycles.

41

Abram, son of Terah (the moon-god), had two brothers, Nahor and Haran, whose names sustain echoes of each other (Na-Hor → Har-An) – the inverted syllable ‘na’ in ‘Haran’ signifying a complementary or opposing view.¹¹⁹ Which leads to the speculation that they represent waxing and waning ‘cycles’, with Abram (Ab-Sin) embodying full moon. The death of Haran at Ur prior to the departure of Abram and his family for Canaan, symbolizes the death of the waning half-cycle; while the fact that their adopted city Haran to the west has the same name as the departed son signifies that he has not died as a person dies, but rather remains present to be reborn anew with the next cycle of the moon. An was the Sumerian sky-god; while Hor, as has been established in the account of Moses meeting Yahweh, is equatable with Sin, the Babylonian moon-god. Nahor was also the name of Abram’s grandfather – waxing cycle giving birth to the moon-god Terah who in turn fathers a new ‘god’ (full moon), Ab-Sin: a figurative lineage suitably congruent with the cyclical nature of the sacred measure.

ANOTHER FIGURE supporting the calendrical foundation of scriptural texts is secreted in the narrative of the Israelite camp across the Jordan at Gilgal in Canaan (which follows the second census in the wilderness):

“The Israelites did as Joshua told them: they took twelve stones from mid-Jordan to match the number of the tribes of Israel, as Yahweh had told Joshua; they carried them over to the camp and set them down there. Then Joshua set up twelve stones in mid-Jordan in the spot where the feet of the priests who carried the ark had rested; they are there even now.” [JOSHUA IV: 8/9]

“It was the tenth day of the first month when the people came up from the Jordan and made their camp at Gilgal, east of Jericho. As for the twelve stones that had been taken from the Jordan, Joshua set them up at Gilgal [footnote: Gilgal means ‘stone circle’].” [JOSHUA IV: 19/20]

119 the nature of *metathesis*, in essence being to signal a relation between complementary aspects of a common referent

Twelve tribes – or lunations – measure 354 days (12×29.5), plus the ten days of the first month after crossing the lunar divide (the Jordan symbolizing the underworld stream of Okeanos) amounting to an annual sum of 364 days – requiring the intercalation of a single Day of Judgement to rationalize with the round solar year.

This episode further draws a connection to the ancient king of Uruk, Gilgamesh, whose name combines the terms *gilgal* and *mesh* suggesting the recently-departed Moses. The stone-circle signifies the calendar: the megalith, herm, masseba or gnomon-stone employed by lunar priests to track the moon (as Hawkins, Hoyle, Thom and a great many others believe was done at Stonehenge). The stones dredged from the river, identifying their rootedness in the aquatic underworld of Okeanos (where more than half the measure of the lunar cycle lay submerged).¹²⁰

GILGAMESH SON OF GOD-AND-SHEPHERD, Lugalbanda, and Ninsun, Sumerian Goddess of Wisdom, in his search for immortality (insight as great as God's), slew both the Bull of Heaven (dispatching the age-old mystery of lunar progress through the sky) and the Serpent guardian of the Underworld, Humbaba (solving the puzzle of the captive moon below). Out of frustration at being unable to cross the celestial ocean he destroyed "the holy things, the things of stone" by which Urshanabi, ferryman of Ut-napishtim (Noah) navigated the waters of Okeanos.

"Urshanabi said to him, 'Gilgamesh, your own hands have prevented you from crossing the Ocean; when you destroyed the things of stone, you destroyed the safety of the boat'. Gilgamesh said, 'Why are you so angry with me, Urshanabi, for you yourself cross the sea by day and night, at all seasons you cross it?' Urshanabi replied, 'It was those very stones that brought me safely over'." [SANDARS, *The Epic of Gilgamesh*, p101]

Gilgamesh replaced the stones, as Urshanabi commanded, with 120 sixty-cubit poles of wood coated in bitumen.¹²¹

120 the underworld was considered the realm of the moon because she presided there two days longer than the sun each month – ie, the two nights each lunation with no moon in the sky

121 SANDARS, *The Epic of Gilgamesh*, pp101/2

The Ocean had never been crossed “since the days of old”. Gilgamesh insisted, “I will cross the Ocean if it is possible; if it is not *I will wander still farther in the wilderness*”.¹²² Only Shamash the Sun had ever crossed it. “The place and the passage are difficult, and the waters of death are deep which flow between.” Gilgamesh, however, braved the peril with the help of Urshanabi. “For three days they ran on as it were a journey of a month and fifteen days, and at last Urshanabi brought the boat to the waters of death.”¹²³

This delineates a lunation as the interval from full moon to full moon – 15 days after which the cycle enters the dark period of ‘the waters of death’ when the moon appears to die (producing two nights with no moon in the sky, before the rise of a new moon and new cycle). Yet the text equates this interval with a period of three days, suggesting that in some figure, the measure of ‘a day’ signifies 15 days.

The stone circle (*gilgal*) which Gilgamesh destroyed was composed of 120 poles; yet the Sumerian circle comprised 360° – suggesting that adjacent poles subtend an angle of 3°. This appears to preserve the memory of the original lunar sighting circle of the ancient astronomers. The poles are described as 60 cubits long – which in fact may record their distance from each other across the diameter.¹²⁴

122 here we encounter an antecedent to the wilderness wanderings of his namesake, Moses, who likewise sought to cross the sacred waters (of the Jordan) to an eternal land of milk and honey
NOTE the suffix ‘mesh’ in ‘Gilgamesh’ is resounded in the name ‘Moses’, arguably derived from *mashah* meaning “to draw out [of the waters of Okeanos]”, designating him – along with Akki, ‘drawer of water’, and Sargon the *mashkim* of Inanna, Sumerian moon-goddess – as a *mashmashu* or ‘diviner’ (cf. Shamash); *mose*, signifying “the begotten” (lunar priest), accordingly comprises the suffix of various Egyptian pharaonic titularies such as Ka-mose, Ah-mose, Thut-mose and Ra-meses

123 SANDARS, *The Epic of Gilgamesh*, pp99–102

124 “the cubit (Hebrew *ammâ*; Akkadian *ammātu*; Latin *cubitus*) was the distance from elbow to finger tip” (a measure – adapted as 44.45 cm or 17.5" [Hebrew]; 44.7 cm or 17.6" [Egyptian]; or in the royal cubit as 50.3 cm [Babylonian]; 51.81 cm [Hebrew]; 52.45 cm [Egyptian] – which comprised 24 fingers or 6 palms: about 18" to 22") *New Bible Dictionary*, p1247

Sixty 18-inch cubits extend 90 feet; while sixty 22-inch cubits would run 110 feet. The lintelled circle of 30 sarsen uprights at Stonehenge, measures 97' 4" from inner face to inner face of the uprights; and 99' 1" from center to centre (which extends the diameter of the sarsen circle to about 100' 10" at the outer face of the uprights).¹²⁵ Sixty royal Babylonian cubits extend 99' – compared with 102' for the Hebrew, and 103' 3" for the Egyptian, correlatives.¹²⁶

Gilgamesh is 38th in the Sumerian Kinglist, while Sargon, the first Akkadian, is ruler 91 (and Narâm-Sin 94) among 147 kings listed. Yet a 60-cubit-diameter stone-circle not unlike that described in the epic of *Gilgamesh* reappears at Stonehenge centuries after Narâm-Sin, as I've conjectured, may initially have constructed his 56-hole circle. While in Egypt we encounter the survival not only of the Sumerian 360-day calendar (requiring 5 intercalary days) but also the divine suffix of Gilgamesh "the begotten" in the titularies of the pharaohs roughly contemporary with the erection of the sarsen circle at Stonehenge.

The Egyptian priests, as has been noted, maintained two calendars: the 360-day solar measure adopted from the Sumerians; and a separate lunar calendar extending 25 years or 309 lunations – which was synchronized with the solar (a mere hour-and-ten-minutes short every 25 years).¹²⁷ But the priests knew that their calendar year did not keep time with the seasons – the celestial solar year extending an extra 5 hours and 49 minutes beyond their 365-day solar calendar year.

The difference between the Egyptian lunar calendar and the true solar cycle amounted to 6.1034 days every 25 solar years.¹²⁸ A deviation preserved in the figure on the Narmer mace-head, which appears to establish the origin of the

125 HAWKINS, *Beyond Stonehenge*, p57

126 $50.3 \text{ cm} \times .3937 = 19.8''$ [Babylonian]; $51.81 \text{ cm} \times .3937 = 20.4''$ [Hebrew]; $52.45 \text{ cm} \times .3937 = 20.65''$ [Egyptian]

127 $25 \times 365 = 9125 \text{ days}$; $309 \times 29.530588 = 9124.9516 \text{ days}$
 $9125 - 9124.9516 = .0484 \text{ days} \rightarrow 1.1616 \text{ hours} \rightarrow 1 \text{ hr } 10 \text{ minutes}$

128 $25 \times 365.2422 = 9131.05505 \text{ days}$; $309 \times 29.530588 = 9124.9516 \text{ days}$
 $9131.05505 - 9124.9516 = 6.1034 \text{ days} \rightarrow 6 \text{ days } 2 \text{ hrs } 29 \text{ minutes}$

25-year 309-lunation Egyptian lunar calendar as an import from Sumeria along with the 360-day solar calendar.

The Narmer mace-head figure (1,422,000) as noted (p38) conceals a measure of 3950 circuits.¹²⁹ This quotient further conceals a round number of 25-year cycles.¹³⁰ Multiplying 'the deviation between the solar and lunar calendars' by this figure (158) produces a product of 964.3372 days.¹³¹ While the time lost by the 365-day calendar in 3950 solar years amounts to 956.69 days.¹³²

In otherwords, the deviation between 'the Egyptian solar calendar of 365-days' and 'the solar year' amounts to about a week less than the deviation between 'the Egyptian lunar calendar' and 'the solar calendar' *over a period of 3950 years* – ie, employing the current measure of .2422 days! But if this 3950-year convergence cycle is considered their *precise* computation of relative deviation, we may conclude that they had reckoned the yearly deviation at .244136 days – which proves a mere 2 minutes and 47 seconds greater than our current *yearly* measure.¹³³

Every 3950 years these two calendars converge – a cycle concealed in the Narmer mace-head figure (1,422,000) from the earliest period of Egyptian history. A dramatic departure from the prevailing consensus on astronomical acuity among the ancients.¹³⁴

129 $1,422,000 \div 360 = 3950$ (a 'modular circuit' comprising 360°)

130 $3950 \div 25 = 158$

131 $158 \times 6.1034 = 964.3372$

132 $3950 \times .2422 = 956.69$ [$964.3372 - 956.69 = 7.6472$ days]

133 $964.3372 \div 3950 = .244136$
 $.244136 - .2422 = .001936$ days \rightarrow 2.78784 minutes \rightarrow
 2 minutes 47.2704 seconds

134 "The zodiac grew up, and must have grown up, as a device for measuring time. Only later did it come to be used for divination, and later still for the analysis of character.... In addition, the Egyptians possessed two calendars which were far superior to anything known to the Babylonians; and because one of them rotated through the seasons there occurred once in fifteen centuries [ie, 1460 years] an epochal beginning-point when the first day of the Wandering Calendar returned to its ideal position in the Sothic Calendar. Thus the recurrence of epochal dates was part of Egyptian culture in a way that it could not

The Narmer mace-head figure (1,422,000) preserves the sacred measure of convergence of the Egyptian solar and lunar calendars. Yet it is encountered on an artifact which derives from the earliest period in Egyptian history, when there is no trace of these calendars or indications of earlier calendrical sophistication. Lending to the speculation that both calendars and the mace-head figure were *introduced* – arguably from Sumeria.

BALAAM SON OF BEOR, a 60-year-old Mittani *barû* from the village of Pethor 20 km south of Carchemish in Amaw, was summoned by emissaries of the son of Zippor, Balak king of the Moabites (300 miles to the south), to conjure a curse capable of confounding the god of Moses and the Israelites, so that the Moabites might defeat them. Yahweh,

be in Babylon. Furthermore, the Egyptians had a traditional celestial diagram which they copied from century to century, and although it was more traditional than contemporary it did represent a particular moment from which time was counted. Thus it is not unfair to say that the first horoscope ever drawn was, so far as we know, that of the Phoenix Era of 2767 BC.

The Egyptians will not have made any predictions from this horoscope, nor was it drawn in terms of the zodiac; but when the Assyrians conquered Egypt in 671 BC, or even through cultural contact in the previous century, there was likely to occur a conflation of influences from which both the zodiac and the notion of astrological prediction could arise. The evidence for this is in the timing.... That was in the seventh century BC. No direct evidence has survived for the use of the zodiac in prediction before the fifth century [BC], and in Egypt before the third [BC]. But Proclus, writing of the philosopher Theophrastus, Aristotle's immediate successor who died about 288 BC, says that 'the most extraordinary thing of his age was the lore of the Chaldeans, who foretold not only events of public interest but even the lives and deaths of individuals'. So astrology as an effective technique invaded Greece in the latter half of the fourth century [BC]. To have reached such a stage of development there must already have been behind it a hundred years of practice. This suggests that the first notion of astrology as we know it was begotten on Babylon by Egypt between the seventh and fifth centuries [BC], and the zodiac itself, as a calendrical device, was of similar origin but may be a little older." [GLEADOW, *The Origin of the Zodiac*, pp206–9]

however, convinced Balaam that the Children of Israel were his ‘first-born’ among nations, rendering him impotent to intercede. Thus, atop the summit of Peor surveying the Israelite camp at Shittim in the plain of Moab, Balaam gave them his blessing instead.

The Moabites – third of the four tribes east of the Jordan to mount resistance against the progress of the Israelites into Canaan – next conspired to seduce the Sons of Israel from their observance of Yahweh. Lured to their apostasy by the daughters of Moab, 24,000 Sons of Israel ultimately fell victim to Yahweh’s plague of divine retribution. Under the regressive influence of the Baal of Peor (god of the Moabites), in otherwords, 24,000 Israelites were lost.¹³⁵

This figure summons a reminder that both the 25-year lunar and the 365-day solar calendar would lose 960 days every 3950 years.¹³⁶ Returning to the old measure would, in effect, deliver the apostates of Israel back to a cumbrous observance of interminably protracted accounts.

The second census in the wilderness follows *directly* on the loss of the 24,000 – confirming that the new measure (601,730 Sons of Israel, representing the 364-day year)¹³⁷ was computed to displace the old. While textual resonance accents this progression from old to new (Baal / Yahweh): Balak / Balaam; Peor / Beor; Peor / Pethor; Zippor / Zipporah (*ie*, father of Balak / wife of Moses). And the Baal measure hearkens back to the Bel measure which was superseded by the revolutionary new calendrical observance of the new God of the Universe, Narâm-Sin.

The Sumerian 360-day Bel or Enlil solar measure was introduced by Narâm-Sin – along with the innovation of the 25-year lunar measure (*cf*, Ab-*rh*m → “father of the *multitude*”) – to Canaan and Egypt alike, where continued observation by the Egyptian lunar priests resulted in the

135 NUMBERS XXII: 1 – XXV: 18 (*Baal-Peor* = God of the Vulva)

136 $24,000 \div 25 = 960$

$960 \div 158 = 6.075943$ (25-year lunar cycle deviation)

$960 \div 3950 = .2430379$ (3950-year annual solar deviation)

137 $601,730 \div 364 = 1653.1043$

$603,550 \div 365 = 1653.5616$

further refinement of an 8-year 100-month calendar cycle of variable 29- and 30-day months comprising a mean year of 364 days (or 52 seven-day weeks) – forcing their exodus.

Yet the Bible relates that the descendants of the Israelites who occupied Canaan, were repeatedly distracted by the prevailing Bel measure down to the time of Daniel. Which, considering indications that the Pentateuch may have been composed late in the first millennium BC, arguably points to a later introduction of the putative Israelite 8-year calendar than the scriptural accounts would appear to support.¹³⁸

As early as the second generation after the conquest of Canaan, the Sons of Israel began to desert Yahweh to serve Baal and his consort Astarte.¹³⁹ In fact, throughout the book of *Judges* the Israelites repeatedly forget “Yahweh their God and serve the Baals and Asherahs”,¹⁴⁰ for which they must endure six periods of enslavement (totalling 111 years).¹⁴¹ In other words, returning to the Bel or Baal measure has reduced them to the condition of ‘enslavement’ they were made to endure under the equivalent observance in Egypt.

This cycle of apostasy is punctuated with the redemption delivered by fourteen champions of Israel, known as the Judges – who defend the supremacy of Yahweh for a total of 299 years.¹⁴² Adding the intervals (111 + 299 = 410) and dividing by 14, produces a quotient of 29.285714.

138 the combined period of bondage in Egypt and sojourn in the wilderness – 470 years – appears to incorporate a recognition of the revolutionary 235-month Metonic cycle ($2 \times 235 = 470$) which is first recorded in 432 BC; suggesting that this focal interval in the account of Moses and his momentous epiphany may preserve a recollection of the fifth century BC

139 JUDGES II: 11–3

140 JUDGES III: 7 (*ie*, the Canaanite ‘gods’ or measures)

141 8 years under Cushan-Rishathaim king of Edom [JUDGES III: 8]; 18 under Eglon king of Moab [III: 14]; 20 under Jabin king of Canaan and Hazor [IV: 3]; 7 under Midian [VI: 1]; 18 under the Philistines and Ammonites [X: 6–8]; and 40 under the Philistines [XIII: 1]

142 Othniel (40); Ehud (80); Shamgar; Deborah and Barak (40); an unnamed Judge; Gideon (40); Abimelech (3); Tola (23); Jair (22); Jephthah (6); Ibzan (7); Elon (10); Abdon (8); and Samson the Danite (20) [JUDGES III: 9 – XVI: 31]

Note that the *six* periods of enslavement are countered with *twelve* explicit periods of redemption: compounding an effective mnemonic of $1\frac{1}{2}$ periods. Which is resounded in the number of months the sum of 410 exceeds a year.¹⁴³ A compound, appropriately, which accentuates the value that the old 30-day month bears for the Isrælite measure. And when the age of Joshua – the earliest defender of the new measure in Canaan – is subtracted from the redeemer sum (his age countering all but a year of the enslavement total), the remainder proves evenly divisible among the fifteen champions.¹⁴⁴ The ‘fifteenth day of lunation’ boasts the full moon – a ‘champion’ presiding at the pinnacle of the cycle poised to *judge* waxing and waning phases alike.

BEL, THE BABYLONIAN equivalent of the Sumerian air-god Enlil, was known as Baal in Canaan – variants which all incorporate the etymon, El. The Amorites who revived Sumeria following a period of decay, became known as the Babylonians – after the name of their capital, Babylon – the original followers of Bel (1894–1595 BC). Known also by his title Marduk (*Amar-utu*, Sumerian; *Merodach*, Hebrew) – “*king of the gods*” – Bel incorporated a characteristically Semitic advance.

An earlier Semitic Dynasty in Sumeria (2334–2191 BC), however, also boasted the legacy of a new god: Narâm-Sin, God of the Universe – the *king* memorialized in the poem ‘The Curse of Agade: The Ekur Avenged’ as having defiled the sanctuary of Enlil (Bel) at Nippur. In otherwords, he superseded the authority of Enlil in proclaiming himself God. Which may refer to his revision of ‘the calendrical measure preserved in the name of Enlil’ – involving a new ‘multitudinous’ (p29, fn88) 25-year lunar measure.

The signal Sargonid 56-year nodal regression round borne to the furthest reaches of the empire of Narâm-Sin, may have been accompanied by this improved lunar measure (to judge from survivals such as Beli and Beltain in Britain, Balder in Norway, Balkis in Arabia and Bala or Bali in India).

143 $410 - 365 = 45 \text{ days} \rightarrow 30 + 15 \rightarrow 1\frac{1}{2} \text{ old or Bel months}$

144 $410 - 110 = 300 \rightarrow 300 \div 15 = 20$

Though, of course, it only later came to be associated with Bel – the Babylonians and the Canaanites alike preserving the memory ‘religiously’ in the cognomens of several of their rulers and divinities (employing various forms of Bel, Marduk and Nebo son of Bel).¹⁴⁵

The Sons of Isræl however – likewise heirs to the Semitic Bel measure – grew distinct after refining the calendrical insights further. The measures they preserved remaining at odds with the rest of the Semitic cultures throughout the first millennium BC – although various ‘nations’ further afield appear to have both adopted and improved the radical new measures.

The legendary dispute between the brothers Belinus and Brennius for control of Britain symbolizes the conflict.¹⁴⁶ Sons of Dunvallo, the elder Belinus proved victorious, while his younger brother was relegated to dominion in the north. The Bel measure preceding the revised measure of Abraham (Bran or Brennius) to the plains of Wiltshire surrounding Stonehenge in the venerated Isle of Avalon (sanctuary of Apollo whom Cæsar equated with Bel).¹⁴⁷

Recall that Avaris, the Hyksos seat in the Nile Delta which the Sons of Isræl are said to have helped rebuild for Seti I and his son Rameses II,¹⁴⁸ bears the same name as Abaris the High Priest of the Hyperboreans who gave Pythagoras the ‘dart’ (crescent) which conveyed him “over rivers and seas and inaccessible places, like one walking on the air”.¹⁴⁹

145 RULERS: Nebuchadrezzar; Abibaal; Baalshamen; Ethbaal; Jezebel; Nabonassar; Marduk-apla-iddina (Marduk-bel-iddin); Nabopolassar; Amel-Marduk; Nabonidus; Belshazzar *et al*
DIVINITIES: Baal-Berith; Baal-Gad; Baal-Hadad; Baal-Hamman; Baal-Peor; Baal-Zebub; Balder; Balkis *et al*

146 THORPE, *The History of the Kings of Britain*, pp70–80

147 speculations on the earliest construction of Stonehenge include:
2900 BC [BALFOUR, *Stonehenge and Its Mysteries*, p101]
2775 BC [IVIMY, *The Sphinx and the Megaliths*, p82]
2180 BC [HADINGHAM, *Circles & Standing Stones*, p231] ± 105
2125 BC [ATKINSON, *Stonehenge*, p89]
1900 BC [HAWKINS, *Stonehenge Decoded*, p63]
1840 BC Norman Lockyer [HADINGHAM, *op cit*, p93]

148 EXODUS I: 11

149 TAYLOR, *Iamblichus A*, p249

Narâm-Sin exported a measure compounding that of the Sumerian god Enlil, which came to be known as the Bel measure. Bel embodied attributes of Enlil, but also added characteristics which define a distinct entity – presenting an ‘evolution’ or transformation of Enlil. As evidenced in the title of Sargon’s almanacs – *The Illumination of Bel* – (p31, fn91) Bel was either familiar to him or ascribed by his successors to a focal position of esteem during his reign. The dignity of Bel (along with the astronomical insights and measures associated with his dominion) was preserved by the Amorites when they restored Sumeria to greatness – the signal Bel measure adopted throughout their empire representing an improvement of the antecedent Sumerian Enlil measure.

This departure from the ancestral measure presents the foundation for the account of the emigration of Abram to the west; though subsequent events in the narrative, record further improvements of the Bel measure unknown to his predecessors. Which is why the prevailing Bel measure of the Middle East was at odds with the Abrahamanic measure throughout the protracted cycles of apostasy following the Israëlite conquest of Canaan.

Despite impressions,¹⁵⁰ the Sumerians (as I have shown in my interpretation of the Kinglist,¹⁵¹ and may be gleaned both from their mythology and its influence in the Bible) left an astronomical legacy of considerable complexity for the Babylonians and their cultural beneficiaries to expand upon – measures which established the foundation for the recognized calendrical advancements of the Egyptians and Greeks, as well as the heretofore unsuspected refinements

150 “Astronomy, which in the last half of the first millennium B.C. became one of the highest scientific attainments of the Sumerians’ cultural heirs, the Babylonians, was practically unknown in ancient Sumer; at least as of today we have only a list of about twenty-five stars and nothing more from Sumer. Observations of the heavenly bodies must have been practiced in Sumer for calendrical purposes if for no other reasons, but if the results of these observations were ever recorded, they are not preserved.” [KRAMER, *The Sumerians*, p90]

151 DRUMBOLIS, *God’s Wand*, pp261–89

of Narâm-Sin¹⁵² and his largely legendary descendant and namesake, Ab-Sin, who personified the revolutionary sect of Egyptian lunar priests responsible for the critical revision leading to the momentous discovery of the Metonic cycle.

THE BURNING BUSH through which Yahweh first revealed himself to Moses, represents lunar cycle (p28) – a figure ingeniously incorporating both phase and course cycles of the moon. As illustrated in the tenth-century Persian epic, the *Shahnamah* of Firdusi (ca 940–1020 AD), the leaves were identified with phases and the branches with courses.¹⁵³

“And whoever ate of its leaves became learned in all that regards the life to come, but whoever ate of the branches became perfect in wisdom & faith.” [KRIWACZEK, *In Search of Zarathustra*, p8]

The ancient complement of the ‘horned creature’ – *bull*, *goat* or *elephant*, with horns or tusks symbolizing opposed lunar crescents (conjoining to complete a leaf-form) – and

152 “Except for the language, the Babylonian educational system, religion, mythology, and literature are almost identical with the Sumerian, excluding, of course, the expected changes and variations due to political developments and the passing of time. And since these Babylonians, in turn, exercised no little influence on their less cultured neighbours, particularly the Assyrians, Hittites, Hurrians, and Canaanites, they, as much as the Sumerians themselves, helped to plant the Sumerian cultural seed everywhere in the ancient Near East.” [KRAMER, *The Sumerians*, pp288/9]

153 Zal “the moon-faced boy” (son of Saum the Pehliva of Seistan) responding to the initial three challenges of the six Mubids (astrologers and wise men) of Shah Minuchihr, reveals:
[1] that the “twelve trees, well grown and green, fair and lofty... sending thirty branches out” represent “twelve moons in the year, and each I praise as a new-made king on a new throne’s blaze: each comes to an end in thirty days”;
[2] that the “two shining horses” – “black as storms in the night one steed; the other crystal, white and fair [who] race for ever and haste in vain, towards a goal they never gain” – represent day and night, which “like the hunted prey from the following chase they flee, yet neither wins the race”;
[3] that the “thirty knights of whom the train is full, then fails, then fills again” represent lunation: “each moon is reckoned thus, so willed by God who governs us...” [*The Epic of Kings* translated by Helen Zimmern (1882: T. Fisher Unwin, London) – cited from www.sacred-texts.com]

the 'branch-like' *serpent*, prefigures this unified spectre of the *radiant* bush. A figure which dramatically increased in significance with the discovery of the Metonic cycle – for the computation of this lunar 'phase cycle' *perfected* the ancient insight into the incredibly complex transit of the moon through the heavens, compounding the previously delimited 'nodal regression (or course) cycle'.

The course cycle takes 18.6 years to repeat (*ie*, the moon retraces its course through the sky every 18.6 years); while the phase cycle needs 19 years for the same phase to recur on the same date. With the discovery of the Metonic cycle, the lunar priests, therefore, were finally able to compute the duration in round years, of this compound cycle – a 1767-year interval between successive appearances of the same phase at the same place in the sky on the same date.¹⁵⁴

This insight would impart incalculable prescience to the sect of lunar priests who first identified the Metonic cycle, a measure whose sacred fount – a burning bush through which the *One God* communed with his elect – appeared sufficiently infused to ignite an emphatically autonomous observance. The Sumerian duality of Enki the water-god (ruling the realm of the serpent) and Enlil the air-god (tending the pasture of the bull of heaven) was reduced to the singular observance of one indivisible God presiding over opposing streams of the divine waters of Okeanos.¹⁵⁵

Which implies that Moses – who first encounters the new unified god in his radiant bower and is the first to muse to the resonance of his unutterable 'name' (*ie*, the five vowels,

154 $18.6 \times 19 = 353.4$

$353.4 \times 5 = 1767$

155 *cf.* Ahura-Mazda the beneficent god of the heavens opposing Ahriman the malign serpent-god of the underworld
NOTE that the 'name' of Yahweh is composed of the five vowels – IEUOA – which the Greeks are reputed to have introduced into the alphabet: arguably representing the *five days* intercalated at the end of a 360-day year; while their compression into one unutterable 'name' of the One True God (on the Day of Judgement) – as depicted in the trilithon figure of the Boibel-Loth calendar [see p176, fn524] – in turn represents the *sole day* required to 'complete' the superior calendar of 364 days: One God, one day; and *one united measure* for both solar and lunar cycles

initially denoting separate feast days, annealed in unison) – personifies the moment the phase cycle was delimited (the compound figure of 470 years ‘in bondage in Egypt’ and ‘in the wilderness’, resounding the 235-month measure of the Metonic cycle). Which returns us to Greece and the date of Meton’s unveiling of the Metonic calendar: 432 BC.

And if the accounts of Moses and the Burning Bush, and the Israelite retreat in Egypt and the wilderness, preserve a record of the discovery of the Metonic cycle, how much earlier than 432 BC might insight into the duration of this phase cycle have extended, given the recorded observance of the inferior *octaeteris*¹⁵⁶ in Greece (and its imputed use in Israel) not long before?

In otherwords, the Mosaic narratives would appear in this light to have been conceived and compiled a century after the repatriation of the Judæan refugees (538–532 BC) from the Babylonian Exile (587–538 BC) – during the time of Ezra.¹⁵⁷

Yet the legend maintains that Gilgamesh slew both the Dragon guardian of the cedar forest¹⁵⁸ (trees as lunations) and the Bull of Heaven¹⁵⁹ in his quest for immortality (or an understanding as great as God’s) – directing attention once more to the relation between Gilgamesh and Moses and the astronomical implication in the term *mashmashu* (diviner); their proclivity for ‘wandering in the wilderness’ – a metaphor for ‘stalking the great year’ to gain complete insight into its cycle (*cf.* p43, fn122); and the nature of the camp at Gilgal across the river Jordan, with its circle of twelve stones (p41), resounding “the holy things of stone” which Gilgamesh destroyed in a fit of frustration (p42).

Was the Metonic cycle in fact known to the Sumerians (the Bull of Heaven ‘slain’ by the legendary god-king), or

156 the mean Metonic month was two minutes longer, while the corresponding *octaeteris* ‘month’ proved 36 minutes 47 seconds shorter, than the average synodic lunation

157 “Ezra was the true ‘Father of Judaism’, for he returned from Babylonia to introduce and enforce not a new law but a new way of keeping the old one.” [*New Bible Dictionary*, p631]

158 SANDARS, *The Epic of Gilgamesh*, p82

159 SANDARS, *op cit*, p86

does the failure of Gilgamesh in gaining immortality (not to mention the demise of his dark other, Enkidu) signify the ultimate shortcoming of their rationalized measure of lunar and solar cycles? Recall that Narâm-Sin – one of the small number of other god-kings in Sumerian history – defiled the sanctuary (or measure) of Enlil by diffusing not only the revolutionary 56-year nodal regression (course) measure throughout his empire, but also the 25-year lunar (phase) round calculated at least to synchronize with the 365-day year (360-day modular year plus 5 intercalary days) – though the 19-year phase cycle appears to have exceeded his astronomers’ grasp of lunar mechanics.

In this reflection, the summoning of a new ‘Gilgamesh’ (“stone-circle diviner”) named Moses, to memorialize the ‘conquest’ of Metonic cycle, appears expressly contrived to supersede the inferior ‘claim’ of his illustrious namesake.

IF THE MEASURES Narâm-Sin reputedly introduced into Egypt and the Levant, and the improved measures Moses conveyed into Sinai, were lunar, how is it that historians all agree that the beliefs and rituals of the Egyptians were so emphatically solar?¹⁶⁰ A review of the characteristics of the Egyptian gods reveals that Egyptologists – unfamiliar with the complexities of *lunar* measures and cycles – have, in fact, failed to recognize the structural component of the pantheon.¹⁶¹

The gods represent variant manifestations of lunar cycle: a different *face* for every focal lunar phase (*see* p245).

160 “It is really only in Egypt, Asia and in primitive Europe that what we call sun-worship ever attained sufficient popularity to become at any time, as in Egypt for instance, really dominant.” [ELIADE, *Patterns in Comparative Religion*, p124 – however, this is prefaced with:] “...compared with celestial figures, evidence of which we find almost everywhere, divine figures of the sun *are rare*.” (emphasis added)

161 “At an early date the sun-god had absorbed various divinities such as Atum, Horus and the scarab-god Khopri. From the Fifth Dynasty onwards [2500 BC], the phenomenon became general: a great many divinities were merged with the sun producing the ‘solarized’ figures, Khnemu, Min-Ra, Amon-Ra, etc.” [ELIADE, *op cit*, p138]

Isis and sister Nephthys identify the two dark nights with no moon in the sky: the lunar goddess presiding over the realm of the underworld. Two 'weeping' sisters to lament the two 'lost' phases; though the repeated syllable in the name Isis (who overshadows Nephthys as goddess of the underworld) was contrived to complement the duplex-god at the opposite pole of the cycle: twin full moons.

Horus, bringer of light, represents waxing crescent – not the rising sun. He is the child of Isis and Osiris, who proves to be a phallic presentiment – the waning crescent – the god who descends into the underworld to fertilize the goddess (who swallows him) and propagate the new moon.

Thoth (recognized as a moon god)¹⁶² represents waxing half-moon. Self-begotten among the gods, he commanded Ptah, Khnemu and Maat (his consort) to create the world. In other words, this focal phase incorporating an arc and a line – the only 'straight' line in nature – precipitated the discovery of the perplexing ratio of π (3.14159: the relation of diameter to circumference of a circle) which led to the establishment of measure, geometry, astronomy and script – Thoth identified as the inventor of "numbers, arithmetic, geometry and astronomy" as well as hieroglyphics.¹⁶³ His name (also rendered Taat or Tehuti), compounded with that of his consort Maat – Tehu-Maat – summons the etymon of the great Babylonian mother-goddess Tiamat (*diameter*) who was credited with the *division* of the divine waters of the encompassing ocean into two distinct realms (Okeanos; or as the Egyptians knew it, *Sin Wur*): one presided over by *Sin*, the moon-god; and the other – the underworld – by the goddess (*wr* – from *ur* – meaning "great one").

Amon, the bright one, turns out not to represent the sun, but the moon on the first night of full moon. While the second night of full moon belongs to Ra: Amon-Ra, the complement of the *duplex* spectre at the opposite pole of the cycle – great goddess *Is-Is*.

Set describes the first waning phase following full moon, the abominable divide between waxing and waning 'cycles'.

162 SYKES, *Everyman's Dictionary of Non-Classical Mythology*, p209

163 SYKES, *op cit*, p209

The villain of the pantheon not only for killing Osiris (*ie*, initiation of the downward cycle ultimately responsible for the death of the moon following waning crescent) but also because his phase alone among the nine focal gods, had no complement or shadow: twin dark nights, twin full moons, opposing crescents and opposed half-moons...

Ptah, the smith, architect of the universe (with Khnemu and Maat) under the command of Thoth, describes the waning half-moon – complementing the phase of Thoth.

And finally, Osiris, god of the dead, represents waning crescent – father of the new moon (complementing his son Horus).

Nine focal phases of lunation which introduced the idea of the *Paut* or company of nine gods (*Ennead*): Tem (Ra), Shu, Tefnut, Geb, Nut, Osiris, Isis, Set and Nephthys; *et al*. Nine confederates conceptually recollecting the ninth god – Thoth's phase ideally occurring on night nine in the cycle – because an understanding of lunar cycle proceeded from a consideration of the ratio of diameter to circumference of the circle, incited by the spectacle of the half-moon. Four gods complementing four goddesses (in the *Ennead*) with Set again odd man out.

In the earlier dynasties, Amon – *the hidden one*¹⁶⁴ – was always represented in compound, coming to the fore as the dominant god at the start of the 18th Dynasty (*ca* 1580 BC). His hieroglyph a pregnant belly, the name Amo[o]n fairly begs lunar identity. Son of the virgin Neith (the celestial cow), his counterpart Ra – likewise frequently portrayed in compound: Af-Ra, Khepera, Ra-Harakhte, Amon-Ra, Ra-Osiris *et al* – was credited with creating the company of gods out of his own names.¹⁶⁵ Two full moons alternately depicted as [1] pregnant – with the gods; and [2] creating them in his name.

164 Bakh the sacred bull manifestation of Menthu at Hermonthis (waxing aspect), and Apis or Serapis the sacred bull of Memphis in whom either Ptah or Osiris was presumed to be incarnate (waning aspect), sharing his appellation 'the hidden one' – both concealing measures compounded on the observable cycles

165 in otherwords, all the gods were merely Ra under different names: full moon accumulating the other phases

While late in the 18th Dynasty (*ca* 1370 BC) the 'heretical pharaoh' Akhnaton, removing downriver from Thebes to the new capital of Akhet-Aten, displaced the observance of Amon with the worship of the Aten – commonly held to represent the sun-disc – the earliest instance in history of monotheism (according to Sigmund Freud). Yet a review of the three depictions of the Aten in the tomb of Huya at El-Amarna (site of ancient Akhet-Aten) clearly reveals that it was a symbol intended to signify an *entire* lunation.

In place of an unmanageable bureaucracy of priests each devoted to a separate deity, Akhnaton undertook to reduce the expense of their extravagant rituals by budgeting the resources of his realm in a radical singular observance. Yet, on reflection, it becomes evident that this would require an even greater grasp of lunar cycle than the sequential worship of nine focal deities on the day of their respective phases. Rites of Amon celebrated *with* the appearance of the first full moon, for example, need not establish which day in the cycle this phase occupies. Whereas a standardized lunation could prove risky, given the considerable variability between phase intervals from lunation to lunation (*cf.* p101).

Yet three of the scenes in the tomb of Huya represent the Aten with differing numbers of rays, which make no sense in a solar context but conform perfectly to a lunation.¹⁶⁶ The Aten in the left lintel scene sheds nine rays engulfing king and queen. The right lintel depicts Akhnaton across from the goddess (personified by Queen Tyi his mother) with 16 Aten rays embracing them. The hand at the end of the second ray holds an ankh to the mouth of the queen mother (*ie*, the first two rays represent the two nights at the beginning of a lunation when the moon resides entirely in the underworld with the goddess). The fifteenth ray holds an ankh to the mouth of the king (*ie*, the first night of full moon falling on day 15 – Akhnaton personifying Amon on earth); while the sixteenth meets his eyes (*ie*, the two days of full moon illuminate the *manifestation* of the brightest phases in the cycle – the king – as the two complementary nights of darkness shadow the domain of the goddess).

166 VELIKOVSKY, *Oedipus and Akhnaton*, plates 15, 17, 18

Three men file behind the goddess on her throne (*ie*, the three *days* between crescents), while the third ray meets her upraised hand – appropriately adopting the shape of the waxing crescent – as a child beneath both her hand and the third ray of the Aten, raises a similarly curved hand in salutation like the goddess, personifying the new crescent which appears on the third night of the cycle.

The banquet scene in the tomb again depicts the goddess in opposition to the god-king, beneath an Aten diffusing seventeen rays – the final beam meeting the mouth of the serpent on the uræus crown of the Ra-king (*ie*, the serpent begins to consume the moon on day 17 in the lunar cycle, initiating its decline back to the underworld).

The night that goddess and god-king appear together on adjacent thrones, basking in the radiance of nine Aten rays (left lintel scene) represents waxing half-moon – the phase half in the domain of the goddess and half in the precinct of the lunar god. Thus they sit side by side, sharing the rule of the divided heavens.

Evidence of a historical co-regency to some scholars (or incest between Akhnaton and his mother Tyi, to others), such figurative narratives prove in this light to preserve a testimonial to the gods, of the fulfillment of the king's and queen's divine roles as mortal guardians of the sacred cycle. Script originating as 'signals' from the pantheon of lunar gods,¹⁶⁷ the emblematic depictions preserved in mortuary temples and tombs, were directed appropriately at them, not posterity – revealing less about the history of the king and queen-mother than the mystery of their divinity.

As with the tradition of allegorical painting, interpreting the narratives preserved in figurative depictions such as the Egyptian mortuary panels, without an understanding

167 *mdw-ntr* – the Egyptian term for 'hieroglyphics' – meaning "voice of the gods" (*ie*, mute signs symbolizing lunar phases)
 NOTE that the hand terminating each ray of the Aten in these depictions is identical to the phonetic hieroglyph 'r' (*cf*, *teth* – the ninth letter – signifying half-moon, the phase which incited the concepts of 'measure' and 'script'), a hieroglyph alternately inscribed using the character of a semicircle or half-moon
 [MEYERSON, *The Linguist and the Emperor*, p257]

of the symbolism implicit in their iconography, runs the risk of rendering the arcane ludicrously profane.¹⁶⁸

60 “The symbol of Mitra was the winged sun’s disc” which he conveyed across the sky in a chariot “whose rays dazzled mankind”, pulled by “four immortal white steeds”.¹⁶⁹ The sun-disc further symbolized the Eye of Ra, which was also a cognomen of the fire-goddess Sekhmet, consort of Ptah the smith. Yet she was addressed as Lady of the West – like Isis – the precinct of the moon (waxing crescent prevailing *in the west* throughout the first night of the appearance of new lunation).

The term ‘Aten’ summons the spectre of Athena – whom Graves identifies as the Queen of Heaven¹⁷⁰ – the patron deity of Athens (which in turn resounds the name of the supreme Sumerian goddess Anata – mother of Enlil or Bel – in metathesis). Athena’s father Zeus swallows her mother Metis (*ie*, the old moon submerged in the underworld) and gives birth to his daughter from his forehead. Homer describes her as *thrice-born*: an enigmatic disposition until subsumed in a lunar context, as may be gleaned from her

168 Amenhotep III, the father of Akhnaton, succeeded his father Thutmosis IV (*ætat* 25) either at the age of 8 or 14 – conceived in that case when his father was no older than 11 – yet “a public proclamation of his marriage to Queen Tyi and of a wild cattle hunt when the king personally slew 56 great bulls in one day” a year after his accession (*ætat* 15 in the best case), fails to arouse the slightest suspicion among those who have undertaken to entertain such ‘accounts’ literally [COLLIER, *King Sun*, p52] NOTE that this proclamation in all likelihood records the young king assuming his grasp of the sacred (*ie*, secret) 56-year round of the 18.6-year nodal regression cycle of the *course* of the moon (the bull signifying lunation, the great bull a year of lunations)

169 four white steeds – complementary half-moons together with twin full moons – completing the lunar diorama of opposed crescents parenthesizing the dark divide [COLLIER, *op cit*, p43] NOTE Mitra, rising spectre in the original trinity of Indo-Aryan (*ie*, Vedic) gods – with Indra the avenger (waning crescent), and Varuna the dark one (god of the underworld) – was replaced by the Brahmans with Brahma the creator (waxing crescent) in a newly-figured trinity with Vishnu the preserver (full moon) and Shiva the destroyer (waning crescent)

170 GRAVES, *The Greek Myths*, p753

inclusion in the Libyan triple-goddess composite – Neith / Metis / Anath (Ath-Enna): waning crescent / goddess of the dark divide / waxing crescent.¹⁷¹ A figure conceived as the *dark* antithesis to the luminous (or visible) triple-goddess spectre: maiden (waxing crescent) / mother (full moon) / hag (waning crescent).

It should now be clear that the triadic composites invoke distinct aspects of lunar cycle: [RESURRECTION – *waning crescent / goddess of the underworld / waxing crescent*, or *days 29 / 1-2 / 3*] Osiris / Isis / Horus, or Osiris / Neith / Horus; [INCLUSIVE – *waxing crescent / full moon / waning crescent*, or *days 3 / 16 / 29*] Horus / Ra / Osiris, or Khepera / Ra / Tem; [OCCLUSIVE – *waning half-moon / waning crescent / god of the dark divide*, or *days 23 / 29 / 1-2*] Ptah / Osiris / Seker.

This insight lends itself to a re-evaluation of three of the focal triadic compounds in Egyptian history. The names of the first three kings of Egypt are confused. For example, in the list compiled by William Stevenson Smith they appear as Scorpion, Narmer and Aha (the last two together known as Menes). While in a more recent tabulation compiled by Richard Parker they appear as Scorpion, Menes (Narmer) and Ity (Hor-Aha).¹⁷² The confusion, however, may be dispelled when the names are combined to effect a lunar triad resounding the inclusive trinity of Horus / Ra / Osiris: Hor-Aha / Narmer / Scorpion, a trinity of Menes (“the moon”). Like Horus (waxing crescent), Hor-Aha was figured as a “fighting hawk” whose *nebti* name was Men; like Amon-Ra (twin full moons) Narmer boasts a duplex cognomen; and like Osiris (waning crescent), the crescent-Scorpion was fated to descend into the underworld to ravish the goddess with his phallic sliver and propagate the new moon. The theophany of Selkit-Isis, it bears noting, was the scorpion.

The Sphinx, likewise, presents a triadic enigma – head of a woman, body of a lion and wings of a bird – which may be profitably reviewed from a lunar prospect. The woman

171 “No certain explanation of her title ‘Pallas’ is known, nor of the epithet *Tritogeneia* applied to her by Homer.” [HARVEY, *The Oxford Companion to Classical Literature*, p55]

172 ENCYCLOPEDIA AMERICANA VOL X, pp14b–d

may be identified as the lunar goddess; the lioness, with the emblem of both Tefnut (daughter of Ra) and Sekhmet (Eye of Ra); and the bird, with 'divine flight'. But it is in the name of the Sphinx (Ra-Harakhte-Khepre-Atum) that a resonance of the inclusive triadic composite of Khepera / Ra / Tem may be discerned.¹⁷³ Though it remains generally unrecognized, her notorious riddle which Œdipus solved, is not about man but about time – the Egyptian measure of a month, it may be recalled, dividing into three periods. Her orientation toward the east likewise overlooks a focal nuance of lunar cycle: the east being the terminal residence of the *waning* crescent before its descent into the underworld. In this respect the Sphinx is figured to preside over the realm of the goddess – *ie*, facing the direction in which the goddess (whose monthly course takes her from west to east) faced. She represents an embodiment of the goddess, not a worshipper, for whom it would be more appropriate to adopt a face-to-face posture before the deity (presumed, in the conventional view, to be the rising sun). Character and posture alike posing the riddle of the dark divide.

But by far the most enigmatic of the triadic divinities we can elucidate in a lunar light is Thoth, god of time and its divisions, god of just measure, conductor of the dead, god of intelligence, inventor of magic and alchemy, and fount of art and literature. As mentioned, he arguably represents the phase of the waxing half-moon (whose presentiment, it is my contention, triggered the discovery of measure). In a standardized lunation, this phase rises on the ninth night to be celebrated on the tenth day. The ninth letter in the alphabet – *teth* or *theta*, both cognate with Thoth – taking the shape of the half-moon, represents the sound 'th' (the emphatic 't' in Egyptian). While it has yet to be recognized, his name conceals a triadic secret in phonetic characters: *theta-omicron-theta* (half-moon / full moon / half-moon). Which illuminates the origin of the epithet 'thrice-great'.

173 "Strangely enough Ra-Harakhte was also the proper name of the Great Sphinx of Giza who cried to Thutmosis IV: 'Oh, my son, it is I, thy father, Ra-Harakhte-Khepre-Atum.'" [COLLIER, *King Sun*, p84] *ie*, (Khepera) Horus / Ra / Osiris (Tem = completed)

The waxing crescent rises on day 3 and six days later the waxing half-moon appears. Thrice-great, however, not only because nine is three times three, but more to the point, for the three focal phases delineating a modular lunation, implicit in the name of Thoth – half-moon / full moon / half-moon.

His night is the ninth night in the cycle, but his day is the tenth day: thereby disclosing the foundation of both the ten-day ‘week’ of the Egyptian calendar and the basis for base-ten numeration. The half-moon also represents the seventh visible phase, inciting the prospect of the divine seven-day interval of Creation (and later, with the introduction of a *doubled* count at the half-moons – *ie*, ‘resting’ on the seventh day – the unattributed seven-day week).

To reiterate, the name Thoth was conceived to secrete the focal phases of a lunation employing the sounds indicated by the phonetic characters representing the days on which those phases fall in the lunar cycle. In characters (9/15/9) and phases (9/15/9) Thoth’s name conceals the epitome of a lunation in a palindromic rebus, when written in Greek letters: ΘΟΘ (the Egyptian phonetic hieroglyphic ‘th’ also comprising a depiction of the half-moon).

Which delivers us of a momentous discovery: the name Thoth appears to have been conceived after the alphabet was introduced. And the alphabet further seems to have been contrived to incorporate this interplay of sight and sound.

Yet the epithet ‘thrice-great’ is now thought to have arisen with the Neoplatonists of Alexandria (third century AD) – a Greek elaboration of their counterpart Hermes.¹⁷⁴ Prior to the publication in 1614 of *De Rebus Sacris et Ecclesiasticis Exercitationes* XVI by Isaac Casaubon, the Hermetic texts were believed to have originated before the time of Moses, with Hermes Trismegistus considered their author. After his exposé, however, the accepted view became that these mystical texts were the product of proselytizing ‘Christians’ seeking to establish firmer grounds for Gnostic dualism.¹⁷⁵

174 the herm originating as a post fixed at the centre of the village to measure times of day and year with

175 YATES, *Giordano Bruno and the Hermetic Tradition*, pp398–401

It is not inconceivable, however, that the early Christians may have reprised ancient texts concerning Thoth, with the intention of superseding Hebrew authorities, in their determination to trace their insights beyond the origins of the Mosaic prerogative back to an antecedent (thereby less compromised) epiphany. But the implication remains that in order for the name of Thoth to incorporate its harmony of phases and phonetic characters, it would have to have been conceived long before the time of Moses, in concert with phonetic script.

Thoth was further credited with the rationalization of the Egyptian calendar. "Before the birth of Osiris, Ra was so infuriated at the faithlessness of Nut that he decreed that her children should not be born in any month of the year. Thoth, however, gambled with the moon [*ie*, Ra] for a seventy-second part of the day and eventually won 5 days, which were added to the Egyptian lunar year [*sic*] of 360 days, thus enabling not only Osiris but his four brothers and sisters to be born out of any month. The addition of these days, known as the Epact, to the years in connection with the birth of Osiris, shows that it was at this time that the adjustment of the calendar took place."¹⁷⁶

That "the birthdays of [Nut's] five children were the five intercalary days"¹⁷⁷ lends to the thesis of the singular god of Moses representing a unification of intercalary days. Allowing that the lunar phases in the Egyptian calendar were each presided over by a distinct divinity and figured with a corresponding phonetic character of the alphabet, individual tributes to Set, Osiris, Isis, Nephthys and Horus the Elder (the children of Nut – united in association with the underworld) on their respective festival days would, of necessity, invoke separate characteristic sounds. Whereas a calendar of 364 days requiring only a single intercalary day for its rationalization, would summon a solitary oblation: that is, given the tradition where the names of the gods were secretly figured as phonetic characters (like Thoth).

¹⁷⁶ SYKES, *Everyman's Dictionary of Non-Classical Mythology*, p163

¹⁷⁷ SYKES, *op cit*, p157

Yahweh the One indivisible god (like the Aten) – whose ‘name’ is revealed first to Moses, on abandoning Egypt and the tradition referred to – proves to have been introduced as the god of a people whose calendar extended 364 days (11 months of 29 days plus 1½ months of 30 days). And the ‘name’ – composed of four phonetic characters (YHWH) which together invoke a distinct fifth vocable – was figured arguably later, as the compound of five vowels (*the hidden ones* in most Semitic script – IEUOA – not unlike characters of the underworld). Five days compressed into one – the Day of Judgement – when the unspeakable ‘name’ of god was intoned once a year in private by the high priest alone.

Which leads to the inescapable conclusion that Yahweh – like the gods of the tradition from which he emerged – is an unmistakably calendrical figment.

And Narmer, who likewise effected a unification (Upper and Lower Egypt), may prove – in light of his position in the putative Menes trinity: Hor-Aha / Narmer / Scorpion – to have united little more than the two halves of the lunar cycle. As mentioned, the duplex aspect of his cognomen suggests the figuration of twin full moons, each conceived to preside over half the cycle (waxing on the Nar or Amon side, and waning on the Mer or Ra): the pivotal spectre of his duplex phase hinging the cycle at its apex.

The complementary crowns of Upper and Lower Egypt may support this speculation. The crown of Upper Egypt – white with a vulture emblem – figures the waxing cycle (white for the rising goddess) situated appropriately in the high country of the south, with Thebes as capital. While the kingdom of Lower Egypt sported a red crown¹⁷⁸ with cobra emblem (for waning ‘cycle’), naturally inclined to the low country of the Nile Delta and the capital of Memphis. A bird figuring rising half-cycle; a serpent, setting (cf, Set).

Which leads to further speculation that the 45 or 46 kings of the first six dynasties may represent a mnemonic for the measure of a lunation and a half. Six dynasties represent 6 quarter- ($6 \times 7\frac{1}{2} = 45$) while 45 days comprise 3 half-cycles.

178 red – frequently the colour of the sky at dusk and dawn – emanates apparently from the underworld

Yet the interval of 920 years which appears to have elapsed through these dynasties is divisible by 46 ($920 \div 46 = 20$).

This suggests an ideal calendar of eight 45-day intervals ($8 \times 45 = 360$) contrived to absorb the unmanageable half-day of a mean lunation by delineating successive intervals alternately from 'first dark night' and 'second full moon'. In terms of actual lunations, it would introduce an extra two-thirds of a day every interval – or 5.6 days a year, rendering the calendar year 365.6 days long¹⁷⁹ (cf, p17: $30 \times 1\frac{1}{2} = 45$).

Although I have not been able to confirm it, indications among a variety of sources and resources suggest that the calendar day may originally have been divided into twenty hours. Thus a 45-day interval would comprise 900 hours, and a 360-day year, 7200 hours (cf, p43, fn123).

The number of kings comprising the first six dynasties and the extent of their cumulative reigns, however, remain controversial. In the two cited kinglists (p61, fn172) the sums given vary from 44 rulers reigning 920 years – excluding either one [Ka-Scorpion] or two [Ka and Scorpion] placed in the pre-Dynastic era – to 45 kings ruling 930 years.¹⁸⁰

Disparities in the six extant Kinglists of Egypt,¹⁸¹ coupled with the confusion of royal cognomens,¹⁸² have resulted in

179 $29.530588 \times 1.5 = 44.295882$
 $45 - 44.295882 = .704118$
 $8 \times .704118 = 5.632944$

180 Ka-Scorpion as twin full moons (one rising one falling) would appropriately head a 45-day interval opening with full moon

181 KARNAK TABLET: 62 *nesu* – Menes to Thutmose III (1425 BC)

ABYDOS TABLET: 76 *nesu* – Menes to Seti I (1290 BC)

SAKKARA TABLET: 47 *nesu* – Merbapen to Ramses II (1220 BC)

TURIN PAPYRUS: divided into periods to the 19th Dynasty –

10 of 17 kings of the Archaic Period recognizable (1200 BC)

PALERMO STONE: fragments of a list to the 5th Dynasty

MANETHO KINGLIST: compiled by a third century BC priest

of Heliopolis [lost] – portions of which were epitomized by

Flavius Josephus (80 AD), Sextus Julius Africanus (230 AD),

Eusebius (340 AD) and Georgius Syncellus (800 AD)

[EMERY, *Archaic Egypt*, pp21–3]

182 the royal cognomen was composed of five names: [1] Horus;
 [2] *nebti* (two kingdoms); [3] golden Horus; [4] *nesu* or *nisut-bit* (north-south) coronation name; [5] birth name (son of Ra)

widely divergent views among historians, concerning the earliest dynastic period. Some believe that ‘Menes’ was the *nebti* name attending the Horus name ‘Hor-Aha’; others, that it represented ‘Narmer’; or ‘Narmer’ and ‘Hor-Aha’ together; while one perceptive authority – H. R. Hall – had anticipated my conjecture, somewhat, by proposing that ‘Menes’ appears to have been the ruling title of all three early kings: Scorpion, Narmer and Hor-Aha.¹⁸³

More than this I cannot add; though the intimation of congruency among the kinglist figures, compounded on the ambiguity of the earliest period of Egyptian history, leads me to submit this suspicion – particularly in light of Narmer’s putative role in that history as a triadic figure-head. Which conforms with the hypothesis that ‘Narmer’ incorporates the Egyptian mnemonic for the sustaining influence of new calendrical measures introduced under Narâm-Sin once Egypt was subsumed into his empire.

The figure incised on the Narmer mace-head (1,422,000), it bears recalling (pp45/6), preserves a measure of the convergence of the 365-day solar and 25-year lunar calendars in use in Egypt long after its manufacture – each losing the same number of days (960) every 3950 years.

THE NARMER PALETTE, as shown in an earlier work,¹⁸⁴ preserves an iconic representation of lunar cycle – not the account of King Narmer’s conquest over the kingdom of Lower Egypt, as is generally held.¹⁸⁵ The figure of the king

183 “As will be seen, the crux of the whole problem of the succession lies in the question whether Menes is to be identified with Narmer or Hor-aha, and which of these two kings, by reason of this identification, must be considered the first monarch of the First Dynasty.” [EMERY, *Archaic Egypt*, pp32/3]

184 DRUMBOLIS, *God’s Shadow*, pp13–7

185 “With the palette of Narmer and a second mace-head also belonging to him, we are presented with records of a more concrete character, and the events they portray are more or less unmistakable. On the palette, Narmer is shown wearing both the crowns of Upper and Lower Egypt, and he obviously claimed to rule both lands. We see him marching in processions with his officials and the standard-bearers of his armies to view

wears a *different* crown on either side of the palette – the white crown of the south (*hedjet*) on the front, and the red crown of the north (*deshret*) on the back – not the double-crown of Upper and Lower Egypt united (*pschent*). Which supports the conclusion that the front presents a depiction of the waxing half, while the obverse completes the waning aspect, of a standardized lunation.

The “two fallen figures” at the base of the front appear submerged in a distinct partition of the palette – the two dark nights between crescents. The *clubbed* ‘captive’ is in actuality being raised from the underworld partition by the king – the waxing crescent of the third night (his figure third from the bottom). Horus – embodiment of waxing crescent – presides over the ascension of six further phases before imparting breath to the half-moon (directly above the figure of the rising crescent).¹⁸⁶ A distinct portrayal of waxing cycle – to half-moon – capped by the highland crown of the white goddess of the south (Upper Egypt): symbol of the advancing spectre of the rising moon.

The obverse – like other ceremonial palettes and funerary steles – employs similar glyphs to portray a multiplicity of insights into the sacred lunar cycle, not narrate the history

the bound and decapitated bodies of his Northern enemies, and also in the conventional posture of a victorious Pharaoh clubbing his prostrate foe.” [EMERY, *Archaic Egypt*, p43]

- A “On it Na’rmer is depicted in the war crown of Upper Egypt and in the red wicker crown of Lower Egypt, signifying that he conquered that territory. Na’rmer is also shown as a bull (a royal symbol), destroying a city with its horns and trampling the enemy troops under its hooves. On the reverse side of the palette two fallen figures lie before him. The god Horus is shown coming to the king’s aid by bringing prisoners to him.” [BUNSON, *A Dictionary of Ancient Egypt*, pp182/3]

- 186 the symbol recurring six times between waxing crescent and half-moon (both the pivotal phases appearing *faced*, as gods) resembles a blossom on a stalk – conventionally interpreted as lotus or papyrus (*djet*) – yet the capital atop each stem presents a perfect half-moon: the antecedent to the ‘hand’ terminating the Aten ray which likewise figured the phonetic sign for ‘th’ (Thoth [*aka* Djehuti]’s letter epitomizing a lunar phase because his phase of the half-moon gave rise to precise lunar measure)

of territorial conquest. Even a paraphrase of my ‘reading’ of the obverse of the palette, however, requires more detail than space will allow here, so I refer interested readers to the aforementioned work, in order that I might extend the insight several centuries to a later composition.

The radiance of the Aten surmounting the portrayal of Akhnaton and Nefertiti captioned ‘The Royal Couple with Three Daughters’¹⁸⁷ exceeds all *pivotal* lunar intervals. Swathed in a fan of 19 rays, the king and queen sit face to face – *opposing phases*. The second and third rays proffer separate ankhs to the nostrils of the queen, while the last two rays extend a similar blessing of eternal breath to the nostrils of the king. Between the ankhs depend 14 rays – the number of days separating the two dark nights without a moon in the sky, from the two nights of full moon. The queen cradles a daughter in each arm: the one in her left arm (waning crescent) gesturing toward the Aten; the one in her right (waxing crescent), toward the king; while a third child in *his* arms – his right arm between its legs – is anointed by the 16th and 17th rays (the divided measure of twin full moons). The enigmatic first ray – impeded by the queen’s forehead – is directed at the head of the child in her left arm (the ‘light’ no longer reaching the ultimate phase of the new lunation’s predecessor).

The royal couple as mortal manifestations of the deities, this panel incorporates the portraits of family members to reprise the cyclical riddle of how the god could possibly be both groom (Osiris) and son (Horus) of the goddess (Isis). How curious that both figures requiring more than two legs to walk, in the Sphinx’s riddle – *child* and *old man* – accord with the personifications of these crescent phases. Especially considering that the ‘swollen’ number of their appendages parenthesizes not only the king whose name – *Cēdipus* – means “swell-foot” but also the ruler who goes ‘blind’ (a lack of visibility in the underworld) after mating with his mother. Three distinct aspects of an immortal god – in each case – entering, remaining in, and departing the realm of the goddess in the underworld, conjoined.

187 SILVERBERG, *Akhnaten: The Rebel Pharaoh*, plate 16

Yet without an inkling of the lunar symbolism concealed in this scene, historians unstintingly view it as a tableau of familial harmony: ‘Royal Couple with Three Daughters’. Hints of the Œdipal aspect, however, complicate the scene in apparently later depictions of the king in a similar composition with his mother – *cf.* the right lintel scene in the tomb of Huya at El-Amarna (p58) – inciting some scholars to interpret it as evidence of an incestuous relationship.

Just as the child (Horus phase of waxing crescent) and the old man (Osiris phase of waning crescent) in a lunar narrative, fitted with the appendages characteristic of their respective ages – *all fours*, and *a cane* – recollect the riddle of the Sphinx, so too the scene with his mother summons the king as an embodiment of the Œdipal complication of lunar cycle. The Amarnian portrayals of lunar cycle and the Œdipal myth alike delineating the same enigma of *cyclical measure*, which is why they appear similar (and why some scholars consider the myth to have been modelled on the reign of Akhnaton).

Yet the Amarna funerary panels – misinterpreted, as I contend, with respect to the lunar essence of the Aten¹⁸⁸ – may also have led to a misreading of Akhnaton’s history.

Funerary tableaux in the necropolis apparently relate the events of his reign, yet the intervals given in these accounts curiously resound lunar measures. In the ninth year of his reign Akhnaton alters references to the One god, from ‘Re-Harakhti (Horus), rejoicing on the Horizon in his name, *Shu-which-is-in-the-Aten*’, to ‘Re lives, Ruler of the Horizon, who rejoices on the Horizon in his name, *Re the father, who*

188 “Our actual knowledge of Akhnaten’s religion is limited largely to those hymns, found in varying degrees of intactness on the walls of the tombs at Akhnaten’s capital. The actual ethical and moral precepts of Atenism have not come down to us.... The Aten was an abstract, intangible god. That much is clear. There were no images of Aten, only the solar symbol. Akhnaten was careful to point out that the solar disk itself was not God, but only a symbol of God. Aten was a life-giving, intangible essence; not the sun or even the face of the sun, but the *heat which is in the sun*.” (emphasis transcribed)
[SILVERBERG, *Akhnaten: The Rebel Pharaoh*, pp75/6]

has returned to Aten.¹⁸⁹ If the interval were understood as the ninth *day* of a lunation, the retirement of Horus with the *return* of Ra (on the appearance of the half-moon) would gain focus – Horus, god of the waxing cycle through to half-moon (whose phases assume a *concave* profile), surrendering the throne of heaven to Ra who presides over the *convex* phases of the same waxing cycle.

The scene depicting the co-regency of Akhnaton and his brother Smenkhkare in the 15th year of his reign, likewise seems suspicious – day 15 in the lunar cycle ushering in the first full moon. In this light, his ‘brother’ may in fact prove a representation of the second full moon (on day 16).

Then in the 17th year of his reign Akhnaton *disappears* – just as the waxing cycle of the moon suffers its demise on day 17 in a standardized lunation, with the appearance of the introductory waning phase (personified by Set).¹⁹⁰

Akhnaton also curiously renames Thebes in the fourth year of his reign, ‘City of the Brightness of Aten’ – the third day of lunar cycle giving rise to the resplendent crescent. The co-regency with his father appears to have ended in the ninth year of his reign – the fledgling moon no longer perceived as a diminution of its antecedent, on graduation to the waxing convex quarter (on day 9).

And Queen Tyi appears to have displaced Nefertiti in the tableaux following the twelfth year of her son’s reign – *ie*, the annual cycle of lunations repeat with the completion of the twelfth ‘month’ (the goddess’s measure: *the lunation*; the gods’: *the phase*).

One must appreciate that the reign of Akhnaton appears in none of the Kinglists – the result of the expungement of his name from much of the record, according to experts,

189 SILVERBERG, *Akhnaten: The Rebel Pharaoh*, pp80

190 “The story of the heretic Pharaoh fizzles away into anticlimax and mystery, after the fifteenth year. We know that the co-regency with Smenkhkare lasted three years [days 15-16-17 of lunar cycle presided over by the full moon, before the rise, on the night of day 17, of the fatal waning augur]...[t]hen, abruptly, the stage is swept clean. Both Pharaohs are gone virtually simultaneously, in the seventeenth year of Akhnaten’s reign and the third of his co-regency with Smenkhkare.” [SILVERBERG, *op cit*, p134]

by successors.¹⁹¹ It is largely from the funerary panels of El-Amarna that the record of his reign emerges,¹⁹² their disclosure to scholars in 1859 affording the first tentative reconstruction of his life.¹⁹³ And despite the accumulation of additional evidence during the past century, the panels remain central to our interpretation of Akhnaton's era.

As with the Hebrew scriptures, however, figures among the panels which apparently refer to intervals of years, may in fact conceal measures of lunation. Abraham's 'age' when Sarah conceives Isaac (99); his 'age' at death (175); the time spent in Egypt and the wilderness (470); Moses's 'age' at death (120); the combined period of apostasy and delivery during the era of the Judges (410); and the inconceivable 'ages' of a litany of other patriarchs (not to mention the untenable census figures) – all demonstrably ciphers of preferred lunisolar measure which only *appear* to delimit ages, reigns and populations.

There remains no more conspicuous precedent for a genealogical *cover* measure than the Sumerian Kinglist – with 'reigns' varying dramatically from a year to 43,200 years! Sumeria the home, it bears repeating, of Abraham and Narâm-Sin alike – 'both' intimate with Egypt.

And it is clear that Akhnaton's 'rebellion' was essentially calendrical – his revision of the prevailing observance of a multiplicity of gods largely identified with either the sun or moon (by which the calendar is still set), focusing on a

191 "Horemheb had struck from the records the names of the four Pharaohs [Akhnaton, Smenkhkare, Tutankhamen and Ay] who had ruled between Amenhotep III and himself" [SILVERBERG, *Akhnaten: The Rebel Pharaoh*, p157]

192 "The biography of Akhnaten and his family can be written today only because archaeologists have spent the last hundred years rolling back the mists of time." [SILVERBERG, *op cit*, p158]

193 "Volume III of [Richard] Lepsius' *Monuments [of Egypt and Ethiopia]* contained twenty-one plates of the Amarna tombs, along with many inscriptions of Akhnaten's reign. These plates formed the foundation for all study of the Amarna period over the next fifty years." [SILVERBERG, *op cit*, p163]

NOTE that the discovery in 1887 of the 377 El-Amarna letters – addressed to Amenhotep III, Akhnaton and Tutankhamen in cuneiform Akkadian – augmented its study profoundly

sole celestial spectre (the sun, as is conventionally believed, or the moon, as I contend).

Akhnaton had his likeness (with those of his family and numerous retainers) portrayed with both male and female attributes – proclaiming himself “the father and mother of humanity”¹⁹⁴ – not because he was effeminate, but to show that the followers of Atenism had become denatured: the Aten embodying characteristics of the gods and goddess simultaneously. He had invoked a new standardized view of lunation, a new perspective on the gods (lunar phases) which fixed their positions in the sacred cycle. The Aten represented an amalgam of all phases; dispensing with the need to honour individual gods on the signal appearance of each recognizance on high. Akhnaton, as the corporeal presentiment of the sacred cycle on earth, sustained the fidelity of the androgynous composite of the Aten in his portraits, because the supreme god – the moon – was not only its own mother and father, but also the progenitor of the insights which foster measured supremacy.

A series of convergences surrounding the periods of the 17th and 18th Dynasties, lead me to speculate on the nature of Akhnaton’s calendrical innovations. The Hyksos assume control of Egypt, according to conventional chronologies, about the time that the alphabet appears. Their capital in the Delta is called Avaris, resounding the reported name of the high priest of Hyperborea (Britain): Abaris. The lunar aspect of the phonetic characters of the alphabet, as I have speculated,¹⁹⁵ inheres among the megaliths of Stonehenge – sighting diagrams to which the lunar priests might turn to maintain the sequence of their observations through extended intervals of interrupted visibility or access (eg, from weather, illness or intrusion).

What are they looking for? They already know the course or nodal regression cycle of the moon – 18.6 years – which appears to have been discovered by Sargon and his grandson Narâm-Sin. But they don’t yet grasp the phase cycle. In this regard, the advancement of a standardized lunation –

194 SABBAH, *Secrets of the Exodus*, p58

195 DRUMBOLIS, *God’s Wand: The Origin of the Alphabet*, pp93/4

such as the Aten of Akhnaton, as I see it – may present one of the earlier working hypotheses toward a decipherment of the 19-year phase cycle (which, as *history* tells us, wasn't disclosed until 432 BC).

Yet, as I contend, the cipher of the combined interval of Hebrew domicile in Egypt (where they reportedly helped rebuild Avaris for Seti I) and wandering in the wilderness, appears to preserve a recognizance of the Metonic cycle (470 years, divided by two localities, producing a quotient equivalent to the sum of lunations required to complete the phase cycle: 235). Moses – whose name like those of several pharaohs of the 17th through 20th Dynasties¹⁹⁶ recalls that of Gilgamesh the model “stone-circle diviner” of Sumerian scripture – arguably symbolizes the calendrical advancement of the 19-year measure.

Ahmes the scribe compiled his mathematical epitome, *Directions for Knowing All Dark Things* (now referred to as the Rhind Papyrus) at Avaris, late in the era of the Hyksos, with its advanced approximation of $\pi - (16/9)^2 = 3.16$ – introduced into Egypt earlier (arguably by Narâm-Sin), as evidenced by its secretion in the calendrical Narmer mace-head figure. This was followed by the return to Thebes as capital of Upper Egypt, by Ahmose – while Greek Thebes is cited in legend as the place the alphabet purportedly put down roots in Europe, sometime after its inception.

Then, some four generations later, the great ‘emperor’, Tuthmosis III, expanded the temple precinct of Karnak at Thebes,¹⁹⁷ where the imposing Hypostyle Hall of Columns in the temple of Amon boasts 134 columns, each 10 metres in circumference – its name resounding that of Carnac in Brittany, the site of miles of megaliths aligned in breath-

196 Ka-mose and his brother Ah-mose (like Moses and Aaron), Tuthmosis I – IV (Thoth-mose) and Rameses I – III (Ra-mose): one each from the 17th and 20th Dynasties, the others from the 18th and 19th (preceding and successive dynasties lacking any sign of the suffix)

197 “The Karnak Temples – the official residence of the God Amon – are...the most massive of ancient Egyptian temples...regarded by some people as the largest place of worship in the entire world.” [МОКНТАР, *Thebes of the Hundred Gates*, p13]

taking avenues. Which appears to have coincided with the last detectable occupation of Stonehenge.

And at least one, if not several,¹⁹⁸ Hyksos kings bear the name Apophis, echoing that of the son of Io – Epaphos – who grew to become ruler of Egypt and great grandfather (according to one legend)¹⁹⁹ of the 50 sons of Ægyptus and 50 daughters of Danaüs, combined in the myth of the Danaïds to represent the Greek mnemonic of the 8-year 99-month calendar – as was revealed in an earlier work.²⁰⁰ Apophis also proves to have been the name of the serpent of the underworld, perpetual tormentor of Ra.

The principal god of Avaris, Set – known originally to the Hyksos as Typhon, whom legend claims was the father of the Sphinx²⁰¹ – lent his name²⁰² to the founder of the 19th Dynasty, Seti I, who notably undertook to have Avaris rebuilt (with the help of the Hebrews). As Lord of the Waning Cycle, it would be natural for Set to preside over Avaris and the Delta land to the north, perceived as the gateway to the underworld both because it is lower than the highland of Upper Egypt, and it opens into the sea (where the moon is submerged). Set is also the reason for the pendant belly in the portraits of Akhnaton, who as the corporeal aspect of the Aten, was anticipated to grow from

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- 198 “The three *prenomina* [‘Awoserre, ‘Aqenenre and Nebhepešre] raise the problem of whether or not there were more than one king with the name Apophis.” [VAN SETERS, *The Hyksos*, p157]
- 199 another myth identifies Inachus king of Argos as grandfather of Libya, daughter of Io [GRAVES, *The Greek Myths*, pp191/2]
- 200 DRUMBOLIS, *Shrouded in Scripture*, pp43/4, fn29
- 201 appropriate that her father proves to be Lord of the Waning Cycle considering my contention that she emulated the goddess in facing the waning precinct of the moon to the east (p62)
- 202 “In the iconography of Seth, which is best known from the 400-year Stela of Ramesses II, the god is represented in foreign attire, wearing a high conical cap with gazelle horns protruding from the front. A ribbon attached to the top, falls down behind the god almost to the ground. He has bracelets, armlets, and bands ornamented with round disks crisscrossing his chest. In addition he wears a short kilt with tassels.... The important point to observe is that the Egyptians represent not only Seth but also Baal by this iconography.” [VAN SETERS, *op cit*, pp174/5]

first appearance with waxing crescent, through pregnancy at full moon, to deliver the Lord of Waning Cycle.

Yet Seti I – son of Rameses I (whose short 16-month reign was dedicated to Ahmose, the 18th-Dynasty founder of the New Kingdom of Thebes)²⁰³ and a denizen of Avaris – may have relocated his capital to the north to reestablish native control of the cult of Set following its debasement by the ‘intrusive’ Hyksos.²⁰⁴ The separation of Upper and Lower Egypt during the Hyksos era, arguably the consequence of conflicting calendrical measures.

The centre of the Amon cult, Thebes – previously known as *Wa-Set* – arguably conserved the traditional 360-day calendar of twelve 30-day months (with 5 intercalary days) against a disruptive new northern measure, *extruded from the waning segment* of the lunar cycle. The complexities of the half-day of the 29½-day cycle falling in Set’s half of the lunation, a radical new 364-day calendar of eleven 29-day

203 NEW KINGDOM XVIII: AHMOSE (24); AMENHOTEP I (21); TUTHMOSIS I (12); TUTHMOSIS II (13); TUTHMOSIS III (54); HATSHEPSUT (15); AMENHOTEP II (26); TUTHMOSIS IV (10); AMENHOTEP III (38); AMENHOTEP IV (AKHNATON) (17); SMENKHKARE (2); TUTANKAMEN (9); AY (4); HOREMHEB (12) XIX (Ramesside): RAMESES I (1); SETI I (16); RAMESES II (66); MERENPTAH (10); SETI II (10); AMENMESES (1); SIPTAH (6); TWOSRE (2) [BUNSON, *A Dictionary of Ancient Egypt*, p71]

204 *Hikau-Khoswet* [*hka has(w)t*] also known as *Amu*, *A’am* [cf. Amorites] or *Setetyu* [cf. Set] [BUNSON, *op cit*, p119]
 “there is every indication that the foreign culture of Egypt in the Second Intermediate Period was in continuity with the Amurrite civilization of the Levant. The long period of acculturation of coastal Syria and Palestine to Egyptian arts and crafts fully prepared the ‘foreign rulers’ and their supporters for taking control of Egypt. This was achieved, not by a sudden *coup d’état* from without, but in cooperation with a fifth-column Amurrite group already established in the Delta. The strong Amurrite princes of Syria-Palestine became heir to the Egyptian throne in a time of the latter’s dynastic weakness.... Furthermore, there is no evidence for any great expulsion of peoples from Egypt into Asia. The defeat of the foreign dynasty was the result of a civil war, and the foreign population which was probably not very numerous simply continued to live in the Eastern Delta.”
 [VAN SETERS, *The Hyksos*, pp190/4]

NOTE that *exo* (as in ‘exodus’) is Greek for “outside”

plus one-and-a-half 30-day months would categorically fall under his jurisdiction.

Nor is it inconceivable that the disruption threatened by this 'advancement' created the climate which may have led Akhnaton to entertain a revision of his own.

The 360-day calendar with five intercalary days was the preserve of Amon-Ra – the seventy-second part of the year (*ie*, the five days) won from the moon by Thoth, figured as children of Nut and great-grandchildren of Ra: Set, Osiris, Isis, Nephthys and Horus the Elder (p64). The texts claim that his gamble occurred *before* the birth of Osiris – the waning crescent (or terminal phase in the cycle – which *introduces* the complication of the half-day measure in the 29½-day lunation).

Thus it may be seen that the 18th-Dynasty entrenchment of Amon at Thebes, and the 19th-Dynasty (*ie*, the Ramesside Dynasty) emphasis on Ra²⁰⁵ in the north, arguably signal the concerted reassertion of the traditional calendar by the indigenous priesthood, on the heels of the revolutionary new imported measure. The advancements and insights which characterize the greatness of Egypt throughout the second millennium BC, it bears noting, were introduced by an earlier migration of foreigners – the Horus people²⁰⁶ –

205 "There are indications from the Ramesside period that Re was, in fact, identified with El. In one version of 'The Contest of Horus and Seth' from this period, Re is described as "the Bull residing in Heliopolis"; it is he who presides over the council of the gods, and he is described as having the Semitic goddesses Anat and Astarte as his daughters. In another mythological text of the 19th Dynasty, 'The Deliverance of Mankind from Destruction', Re is described as an old god who is losing control as ruler of gods and men. In these texts there is no reference to his role as the sun, but instead they correspond entirely with the position and characteristics of El in the Ugaritic texts." [VAN SETERS, *The Hyksos*, p178]

206 "The French Egyptologist Pierre Montet has distinguished three orders of Egyptian society: the *rekhetu* or lower orders, who may originally have been those indigenous dwellers conquered by the Horus people; the *iry-pat* or nobles; and the *henemmet* or sun [Horus] people. These divisions of society were still in force in Akhenaten's day..." [COLLIER, *King Sun*, p45]

who initiated the Dynastic tradition, of which Narmer or Menes was titular patriarch.²⁰⁷ The Hyksos, in this light, may prove to have been emissaries of the enclave of lunar priests at Stonehenge (likewise introduced by Narâm-Sin), updating calendrical insight with the results of their most current observations – the Delta a natural debarkation port for western mariners – the Horus (waxing-emphasis) people understandably threatened by the radical 364-day calendar of their Set (waning-emphasis) relations. Recall that Abaris – the high priest of Hyperborea (Britain) – had his name memorialized in that of the Hyksos capital: Avaris.

Aqenenne – one *prænomen* of the Hyksos king Apophis – lends resonance to the suspicion that Akhnaton (along with his father, Amenhotep III) may have tried to bring about a peaceable resolution of the conflict, by proposing a purely lunar alternative – not unlike the Moslem calendar some two millennia later – a model, ironically, absorbing the temper of the solar fuse with measured lunar poise). *Akki*, the common prefix in their titles, summons shared origins in the Akkadian culture of Narâm-Sin, as well as the depths of the underworld stream of Okeanos out of which lunar measure initially emerged.²⁰⁸ Which further elucidates the

207 *Narmer*, as I contend, merely the Egyptian survival of the title *Narâm-Sin*, the great Akkadian Overlord of the Four Quarters and God of the Universe – a conspicuous heir of what I have termed the ‘veristocracy’ in previous works: an intrusive line of lunar priests responsible for diffusing technological and calendrical insights to the furthest outposts of early civilization

208 *Akki*: “drawer of water” who rescued Narâm-Sin’s grandfather Sargon from the rushes (abandoned there by his mother, like Gilgamesh, Moses, Œdipus, Heracles, Karna, Telephos, Perseus, Amphion, Zethos, Paris, Romulus, Cyrus, *et al*) – cognate with *Oke-* in ‘Okeanos’ (the aspect of ‘water’ opposing *-Anos*, ‘air’) and *aqua* – surfaces also as a prefix in: *Achæa*, *Ægea*, *Achæmenidæ*, *Æacus*, *Academus*, *Acheron*, *Achilles*, *Ægir*, *Agamemnon*, *Aganippe*; and, more germane to the present point: *Ægyptus* and *Agenor* (cf. p75, fn198) [FREUD, *Moses and Monotheism*, p17]

NOTE that *Akki* is further conceptually cognate with *mashah* meaning “to draw out”; *mashkim*, Sargon’s Inanna-aspect; and *mashmashu* meaning “diviner” – overtones of which are infused in the diminutive *-mose* signifying “child” (or ‘heir’)

unexpected cuneiform of the Akkadian letters addressed to Akhnaton at El-Amarna.

The so-called Hyksos arguably also introduced the serial mnemonic of the sighting glyphs employed at Stonehenge, to their Egyptian counterparts – the alphabet subsequently making its entry into mainland Europe at Greek Thebes after the priests of Egyptian Thebes rose in defiance of the new calendrical measure. Thebes in Egypt – renamed ‘City of the Brightness of Aten’ by Akhnaton in the fourth year of his reign – was known prior to this as *Wa-Set* or *No* (a metathesis of *On* or Heliopolis opposite the pyramids of Giza in the north – centre of ‘Atum the Complete One’ – considered the ‘northern pillar’ of the realm; suggesting that *No* was its southern complement, supported by the relation of ‘Aten’ to ‘Atum’, symbols of an entire lunation).

The Greek city of Thebes – which according to myth was founded by Cadmus, son of Agenor king of Tyre – appears to have assumed the name of its Egyptian counterpart (arguably under the Hyksos who were chased into Canaan by Seti I and Rameses II) to spite the presumptuousness of their detractors. The equivalence of Agenor (*Akki-No*) and Ægyptus (*Akki-Ptah* or *Hiku-Ptah* – derivation of the Greek term for *Khem* [Egypt] – sobriquet of Memphis) in different versions of the myth of the Danaïds, appears to preserve a recognition that a controversial patriarchy had removed from Egypt to Tyre before proceeding to Greece.²⁰⁹

209 *Hiku-Ptah* – “Mansion of the Soul of Ptah” – was also known as *Hut-Ra-Ptah*, a triadic compound strongly reminiscent of the Thoth-Ra-Ptah lunar trinity (waxing half / full / waning half) – *Hut* contracted from *Te-Huti* (*Djehuti*, *Zehuti*), the cognomen Thoth was known by before the development of the alphabet. Adopting the name *Men-nefer* or *Menfi* (*Memphis* in Greek) after Pepi I erected his pyramid at Saqqara (6th Dynasty) – a term, it has yet to be recognized, signifying the restoration of the “swallowed” (*nefer*) “moon” (*men*) from the underworld (the *nefer* amulet placed on the stomach of the deceased during mortuary rituals to *restore* it in the afterlife) – the city was also known as *Ankh-Tawy* (“Life of the Two Lands”). The *ankh*, it bears noting, incorporates a horizontal line representing the horizon; a perpendicular line beneath that representing the underworld (divided in two, for the two dark nights with no

It is at least remarkable that the names of the two Greek cities with the greatest history of conspicuous conflict – Thebes and Athens – both trace their antecedent back to Akhnaton's renamed city of Thebes: 'Brightness of Aten'. Further indicating that the putative conflict over calendar measure in Egypt not only spilled over into Palestine but Greece as well.

ANATA AND HER CONSORT Anu, the supreme Babylonian god of the heavens, conceived Enlil, god of air and storms (and father – with Ninlil – of Nannar the moon god). Enlil also represented the calendrical measure of the Sumerians which Narâm-Sin, fourth ruler of the Akkadian Dynasty, "defiled" (p31) – arguably by introducing a new measure which he diffused throughout his empire (referred to here as the Bel measure: 56-year nodal regression round with the 25-year lunisolar cycle).²¹⁰ Enlil metamorphosed into Bel, father of Sin the moon god, among its adherents.

moon in the sky); and a full moon representing Ra (in whom all visible phases were subsumed), surmounting the 'cross' – a compact glyph of the dual spheres of over- and underworld, appropriately signifying "eternity" (lunar-cycle 'life' perpetuated interminably). Note that *Hut* and [*P*] *tah* reflect a metathesis of opposing half-moons; while *Taat* (a variant of *Thoth*) embodies terminal 'crosses' (resembling the *ankh*) separated by the ancient Egyptian name for the moon, *A'ah* (hieroglyphic 't' depicted by the half-moon). The Egyptian term for "pillar" – *djed* – echoes that for "papyrus" – *djet* (likewise depicted by a half-moon, on a stalk: cf. p68, fn186) – both resounding the name *Djehuti*. Thus it may be seen that *Hiku-Ptah* (the early Egyptian epithet for Memphis) and its Greek derivative, *Ægyptos*, initially fused opposing half-moons (not merely Ptah) to the spectre of Ra. Which serves to illuminate another classical misinterpretation: the ancient names of the five planets appear to have originally represented pivotal Egyptian lunar phases – *Saturn* (Cronus) derived from *Set*; *Jupiter* (Zeus) from *Ptah*; *Mars* (*Ares*) from *Horus*; *Venus* (Aphrodite) initially *Isis*; while *Mercury* (Hermes) proves the equivalent of *Thoth*. An indication that there must have been a disruptive eclipse of the ancient lunar tradition, to judge from *rational* or *natural* reinterpretations of the surviving texts and symbols which arose during the Classical Age.

²¹⁰ "In Assyria, Tiglath refers to En-lil as 'Old Bel'..." [SYKES, *Everyman's Dictionary of Non-Classical Mythology*, p71]

Employed throughout Egypt – arguably until the time of the Hyksos – this measure was in turn “defiled” with the introduction of the further refinement of the 364-day year comprising eleven 29-day plus one-and-a-half 30-day months (referred to here as the Set measure). As noted (p75, fn202), the Egyptians invoked the same iconography for Set and Baal – supporting the hypothesis that the Set measure was perceived as an expansion of its predecessor. While the 19th-Dynasty characterization of Ra as “an old god losing control as ruler of gods and men”, as indicated (p77, fn205), extends to aspects of El (Bel).

Changes in Set’s significance arise in Egypt during the same dynasty, when “he was viewed as the god of foreign lands”, and then incongruously “elevated to a national god when Ramesses II (1290–1224 BC) honored him at the new capital, Per-Ramesses, in the eastern Delta”.²¹¹ As I contend, this may be explained by the retrenchment of traditional measures under the purview of Set after dispersing the cult of an intrusive foreign measure, ascribed to Set because it undertook to accommodate the *variable* waning ‘cycle’.²¹²

The phase represented by Set – day 17 of the lunation – as further noted, was ‘delivered’ the night following that of the second full moon (Ra, the god who gave birth to the other gods ‘out of his own names’ or ‘spit’). A pregnant god followed by a slightly smaller phase missing a portion at the top (which in turn delivered the waning half of the cycle). And Ra, conjoined with his twin full moon, was variously known as Amon-Ra and Ra-Tem (incorporating the god whose cognomen – like that of the Aten – means “completed one”: Atum).²¹³

In Hebrew scripture, Seth was likewise a son of Adam – the replacement for Abel the pastoralist slain by his elder

211 BUNSON, *A Dictionary of Ancient Egypt*, p243

212 this is the significance of Set killing his brother Osiris *twice* – once for the 29-day and again for the 30-day month – the 14 pieces into which he cuts the body of Osiris, representing the number of days in the waning ‘cycle’ to day 30 (which further accounts for the missing part – his penis – in a 29-day month)

213 BUNSON, *op cit*, p38

brother Cain the agriculturalist. In the Egyptian pantheon, Osiris – the brother Set kills (by initiating the waning half of the cycle) – was perceived as the deity of regeneration, originating as a synthesis of Asari (god of agriculture), and Andjeti (god of vegetation).²¹⁴

Agriculture and domestication of animals alike, it is my contention, proceeded from the *discovery* that copulation effected procreation; early difficulties with salination and soil exhaustion, subsequently leading to a grave mistrust of agriculture among pastoralists – the ‘mark’ of Cain, in this respect, ‘the wasteland’.²¹⁵

In a land like Egypt, however, where the annual flood of the Nile obviates the risk of soil exhaustion, the villain in the drama of cultural stability is characterized as an enemy of agriculture. Villain notwithstanding, Set *was* honoured; according to some scholars, not from a sense of devotion but apprehension.²¹⁶ Others believe that it was because “the wild, red-haired, *white-faced* god” was a pre-Dynastic holdover, who “came to represent [for the Horus kings] those hostile to Horus and Ra and so in time to embody in legend Satan, the prototype of civil strife and evil”.²¹⁷ Yet during the 19th Dynasty, his relation to Ra appears that of a son – embodying Ra’s enemy, the underworld serpent.²¹⁸

214 BUNSON, *A Dictionary of Ancient Egypt*, p197

215 DRUMBOLIS, *God’s Wand*, pp21/2

216 “The evil of his nature favoured rather than hindered the prevalence of his worship. It was in love that offerings were made to Osiris, but Set was worshipped out of fear; for he was strong and mighty, a terror to gods and men. The kings were therefore anxious to secure his favour...” [WIEDEMANN, *Religion of the Ancient Egyptians*, p221]

217 COLLIER, *King Sun*, p35 (emphasis added)

218 “In Tanis, and in several cities under Tanitic influence, the position of Set was peculiar. Here he was held to be a solar deity who pierced the Âpép serpent with his lance, and was called ‘the beloved of Ra’, ‘the son of Nût’ (who was almost invariably regarded as his mother), ‘mighty in the sun bark’, etc. But according to the original conception of Set he was not so much the foe of the Âpép serpent as that serpent itself: the new character in which he appeared at Tanis was undoubtedly the result of his equation with Baal.” [WIEDEMANN, *op cit*, pp221/2]

And while explanations are tendered for this dichotomy in Set worship, nowhere do scholars – who further identify the line of Seth as an inversion of Set – recognize Atum as the antecedent of Adam, *in function* as well as name. This can only be appreciated with the recognition that Atum and Set represent lunar phases – ‘full moon’ swelled with the *conception* of ‘the waning augur’ (first waning phase).

Set, in this light, may appear both ‘beloved of Ra’ (a son) and an incarnation of Apophis (Ra’s serpent enemy, who begins to consume the moon – at the phase of Set – until all but the waning crescent remains). Or, conversely, when Set spears the underworld serpent, he brandishes the lance (or crescent) he is in effect reduced to, as Osiris.

As mentioned (p65, fn178), red – the colour both of Set’s and his adherents’ hair²¹⁹ – was a natural choice for the Delta lowland of the north (opening into the underworld), because of red skies at dusk and dawn. Blood too emerged from the belief that Set dispatched and Apophis consumed the last sliver of the waning moon. *Uat-Ur* – arguably the Egyptian term for the Mediterranean Sea²²⁰ – conceptualizes a prefiguration of the underworld, or *Tuat*, with the contraction of the initial ‘t’ (both waxing and waning terminals together submerged). While ‘Tanis’ and ‘Satan’ each preserve echoes of *thanatos* – Greek for “death” – which in turn may also be exhumed from the name ‘Danaüs’.²²¹

And Danaüs – great grandson of Epaphos and father of the 50 Danaïds – was the twin (alongside Ægyptus, father of 50 boys) who represented the *underworld* aspect of the Greek 8-year 99-month calendrical mnemonic. His father Belus – likewise a twin with Agenor king of Tyre – was the son of Libya (daughter of Epaphos) and Poseidon.

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- 219 WIEDEMANN, *Religion of the Ancient Egyptians*, p221
NOTE that the term *Adom* in Hebrew signifies “red” [SABBAH, *Secrets of the Exodus*, p58]
- 220 translated as “great green” – though *ur* conveys “light” – without recognizing it as the probable etymon for ‘water’ [BUNSON, *A Dictionary of Ancient Egypt*, p274]
- 221 ‘Dan’ signifying “judge” (of the souls of ‘the dead’: *thanatoi*) as ‘in the underworld’ [GRAVES, *The Greek Myths*, p758]

Thus the moon-goddess Io (mother of Epaphos) gives birth to the figurative manifestation of Apis the sacred bull of Memphis²²² – ‘the hidden one’²²³ – presumed to harbour the incarnation of the underworld god Osiris. And while all ancient bull figures embody ‘lunation’, Apis was *sacred* – cf. the 56 select ‘great bulls’ pursued by Amenhotep III (p60, fn168) – because he represented a special ‘hidden’ lunar measure: the *secret* 25-year priestly cycle.²²⁴ Which, it will be recalled, was the measure arguably diffused by Narâm-Sin throughout his empire, along with the 56-year nodal regression round.

This ‘Hap’ aspect of the Bel measure is detectable in part, in the names of its adherents: Abaris, Avaris, Khabiroi, Apidianians (ancient Arcadians),²²⁵ ‘Apiru, Habiru, Hebrews, Ibri, *et al.* As noted, *Ab-ram* (p28, fn82) interpreted as ‘father [*Ab*] of the multitude [*rh*’]’ (p29, fn88), appears to represent the ‘moon-father’²²⁶ [*Ab-Sin*]’ memorialized as the personification of the multitudinous 8-year 99-month calendar (p22) – heir to the 56-year nodal regression round of his namesake Narâm-Sin, through the line of Noah’s sons: Shem (56-year cycle), Japheth (half-measure of the older 30-day month) and Ham (radical new 29-day month).

And Noah – tenth generation from Adam (Atum as ‘the complete one’: a lunation) – is the ninth patriarch in the line of Seth (half-moon as source of all measure). Thus it may be seen that the ‘chosen measure’ of the Hebrews was derived from the Egyptian Set measure (*Noah* hearkening

222 “The Greek name for Apis [Asarhap, Hap, Serapis] is Epaphus.”

[RAWLINSON, *The History of Herodotus* II: 153, VOL 1, p194]

223 BRAY, *Bray’s University Dictionary of Mythology*, p124

224 “The sacred bull of Apis was required to have a white crescent on one side of its body or a white triangle on its forehead... [being] cared for by the priests for a period of 25 years and then drowned.” [BUNSON, *A Dictionary of Ancient Egypt*, p27]

225 Ἀπειρανθεῖς [MAIR, *Callimachus: Hymn* I: 13, p39]

226 *Ab* signifying “father” in the sense of “priest” in Egyptian – thus “lunar priest” [*Ab* also intimating “pure” and “heart”] NOTE, in this regard, ‘Abaris’ projects “father of Ares (Horus)” – *ie*, Osiris – the regenerative correlative of Set (as the waning terminals polarize the *destructive* and *restorative* aspects of Decay)

back to the ‘City of the Brightness of Aten [complete one]’ – as Akhnaton had renamed *No* in his fourth year).

The Bel measure evolves (with the figure of Belus)²²⁷ into a refinement elaborated as the product of Asia and Africa (Poseidon and Libya) which in turn gives rise to *distinct* observations of a common construct (the twins Agenor of Canaan and Belus of Egypt). Agenor – father of Europa and Cadmus – it bears considering, was the king of *Tyre*, while its sister city of *Sidon* summons the diminutive of ‘Poseidon’.

Cadmus introduced the alphabet (standardized lunation) to mainland Europe (while searching for his sister Europa) after following a sacred cow (Apis, symbol of the priestly 25-year lunar round) to a spring in Boeotia (*bous*, “ox”) guarded by a dragon (Apophis/Set – cf, p82, fn218) which he slayed before founding the city of Thebes on its tomb.

*Poseidon*²²⁸ (lord of the sea) is harboured in the name of a city in Canaan some ten miles south of Gebel or Byblos where the corpse of Osiris was said to have been recovered by Isis, the first time Set killed him.²²⁹ And Poseidon and his brother Hades inhabit the underworld where Osiris presides over the 42 Judges weighing the Soul, after the deceased manages to barter passage from the *ferryman*. The assonance in the name of the Egyptian regeneration god and that of the Greek sea-god – both of whom legend contends were consumed (cf, p255) – harmonizing more than mere sound resemblance.

227 IO + ZEUS → EPAPHOS → LIBYA

LIBYA + POSEIDON → AGENOR (Tyre) / BELUS (Chemmis)

AGENOR + TELEPHASSA → CADMUS (Thebes) /

PHENIX (Sidon) / CILIX (Cilicia) / THASUS (Thasos) /

PHINEUS (Bithynia) / EUROPA (Crete)

BELUS + ANCHINOË → ÆGYPTUS (Egypt) / DANAÛS (Argos)

EUROPA + ZEUS → MINOS (*moon*) / RHADAMANTHUS

(‘*mantic wand*’ of the underworld judge) / SARPEDON (*serpent*)

[AMON / OSIRIS / APOPHIS-SET]

228 “The derivation of the name is uncertain, but appears to be connected with a word for water.” [HARVEY, *The Oxford Companion to Classical Literature*, p343]

229 BUNSON, *op cit*, p126 (note ‘Bel’ in ‘Gebel’)

Herodotus credits the Danaïds with the introduction of the ‘mysteries’ (measures) of the ‘unspeakable underworld god’ to Greece,²³⁰ yet Poseidon (their great grandfather) was memorialized for *contesting* possession of Attica with Athena (Aten).²³¹ Since the Danaïds represent the 8-year 99-month measure, this would appear to substantiate the thesis of an antecedent 8-year calendar (of 100 months).

It should be increasingly evident that the Greek myths – like the Hebrew Pentateuch – preserve a covert progression of lunation measures. However, where the gods represent phases (as in the Egyptian myths), the Hebrew *patriarchs* assume this aspect; while *their* god perpetuates the notion of the Aten/Atum (Akhnaton assuming the godly phases).

Collated in sequence (as Hesiod, Apollodorus and Graves attempted), the myths trace a *succession* of lunar insights refining the predictability of celestial mechanics, in tales contrived to capture the memory of an entire culture. The lunar priests – sensitive to the risk of losing their legacy (like all archivists back to the Palæolithic Age) – employed a mythic mnemonic to ensure the survival of their insights in the remotest fibre of the Hellenic *demos*. Unfortunately, competing or successive collocations of lunar priests²³² –

230 “On this lake [*nb*, water] it is that the Egyptians represent by night his sufferings whose name I refrain from mentioning [Osiris], and this representation they call their Mysteries.... The daughters of Danaüs brought these rites from Egypt...” [RAWLINSON, *The History of Herodotus* II: 171, VOL I, pp202/3]

231 GRAVES, *The Greek Myths*, pp59/60

232 the Sacred Tradition – which appears to have been disrupted toward the end of the seventh century BC – was succeeded in Greece, and elsewhere in the Levant, by a new discipline of Physical ‘philosophers’ (“*lovers of wisdom*”) who distinguished themselves from their forebears by claiming that “no man is *wise*, but god alone” – as though no one *could* decipher the meaning of the enigmatic myths conclusively; their ‘schools’ or ‘colleges’ remaining unrecognized (with the exception of the *Semicircle* of Pythagoras) in contrast to those of the later Ethical branch of philosophy; yet it is notable that the preceptor of the tradition in Greece (excepting Orpheus) is *disputed* – Musæus of Athens contesting the distinction with Linus of Thebes (*cf*, p80) [DIOGENES LÆRTIUS I: 3/4, VOL I, p5]

not unlike the layers of Biblical recension²³³ – produced many variants of the myths, making a coherent sequence hard to construct.

Yet it proves far less difficult to distinguish the strands of the various measures once these disparate traditions have been tabulated. And the key resides in the names.

Io and Zeus beget Epaphos. Io is the moon goddess (who removes to Egypt as Isis); while Zeus represents the moon god.²³⁴ Epaphos, as noted (p84, fn224), is Greek for ‘Apis’, totem of the priestly 25-year lunar round. Epaphos fathers Libya (the ancient name for the continent of Africa²³⁵ – signifying that the 25-year measure dominated Africa after being introduced). Libya and Poseidon (Sidon, the pivotal Phœnician city between Byblos and Tyre – echoes of ‘Set’ and ‘Osiris’ in ‘Poseidon’) conceive twins, Belus and Agenor. Agenor inherits Tyre, while Belus (Bel measure) presides over Chemmis in the Thebaid (“the sacred floating island in the western Delta near Buto”,²³⁶ where Isis hid from Set to deliver Horus). And Belus – father of the twins Danaüs and Ægyptus (Greek mnemonic for the 8-year 99-month calendar) – was married to Anchinoë, daughter of Nilus.

In otherwords, the Greek *octæteris* measure is derived from the son of Libya (Horus)²³⁷ and daughter of the Nile (Apophis²³⁸ – An[at]-šin-noë: Anat, mother of Enlil / Bel;

233 the Bible is *conventionally* held to have developed in six stages: [J] Jahvist (1000 BC); [E] Elohist (900 BC); [JE] Composite (700 BC); [D] Deuteronomic (600 BC); [P] Priestly (500 BC); [EZ] Ezraic (480 BC) [FREUD, *Moses and Monotheism*, pp68/9]

234 saved at birth by his grandmother Gæa, from being consumed by Cronus his jealous father (like his three sisters and two brothers), Zeus *initially* embodies waxing crescent (Horus) – the first visible phase of the new lunation appearing on day three in the cycle (third ‘son’; first ‘surviving’) [APOLLODORUS I.1:5, VOL I, p7]

235 RAWLINSON, *The History of Herodotus* IV: 45, VOL I, p305

236 BUNSON, *A Dictionary of Ancient Egypt*, p53

237 “Nannar [Sin] was frequently referred to as ‘the heifer of Anu’ because of the resemblance of the crescent moon to Horus.” [SYKES, *Dictionary of Non-Classical Mythology*, p149]

238 “Apophis lived...in the celestial waters of the Nile...” [BUNSON, *op cit*, p27] – while the fecundity of the Nile was attributed to the penis of Osiris consumed by Oxyrhyncus

Sin [Nannar] the son of Enlil/Bel; *No*, Amon's city: Thebes). Which points to the Set/Apep measure of the Hyksos, as the seminal 'progenitor' of the 8-year calendar – with the inclusion of No[ah] in the name Anchinoë,²³⁹ emphasizing the initial *octaeteris* variant of 100 months (cf, p20, fn53).

An anatomy of implicated names discloses a progression of six notable calendrical measures succeeding Narâm-Sin: [1] BEL; [2] HOR; [3] AP; [4] SET; [5] DAN; [6] BRAN. The names from which these 'sectarian' syllables resound, appear throughout the scriptures, myths and inscriptions of cultures from the Mediterranean and Middle East to the Irish, North and Baltic shores – attesting their alignment with a particular cycle: [1] 56-year; [2] 70-year; [3] 25-year (all employing the 360-day year of twelve 30-day months); [4] the variable 29-day/30-day month; [5] 8-year 100-month (eleven 29-day plus 1½ thirty-day months producing a 364-day year); [6] 8-year 99-month (the Dan cycle rising from the Set measure – which developed into the Bran measure, on the removal of the Hyksos to Canaan in the campaigns of Seti I and Rameses II).

The transitional measure of Akhnaton – which appears to have advanced a compromise of the competing Hor and Set measures, with the proposal of a 360-day year of eight 45-day 'months' (cf, p66) – ultimately engendered the 8-year Dan cycle.

239 "If we believe the Egyptians, Hephæstus was the son of the Nile, and with him philosophy began, priests and prophets being its chief exponents. Hephæstus lived 48,863 years before Alexander of Macedon, and in the interval there occurred 373 solar and 832 lunar eclipses." [DIOGENES LÆRTIUS I: 2, VOL I, p3]
 $48,863 \div 373 [20 \times 18.65] = 131$ (6⅔ fifty-six-year cycles)
 $48,863 \div 832 [52 \times 16] = 58.729567$
 $48,863 \div 3950 = 12.370379 \rightarrow 12.370379 \times 29.530588 = 365.30456$
 NOTE the Greek counterparts to the Egyptian gods, in order:
 ARES *Horus* – waxing crescent; HERMES *Thoth* – waxing half;
 APOLLO *Amon* – first full moon; ZEUS *Ra* – second full moon;
 POSEIDON *Set* – first waning phase; HEPHÆSTUS *Ptah* – waning half-moon; HADES *Osiris* – last waning phase (the crescent);
 Hephæstus here credited with the origin of the sacred and prophetic traditions because the half-moon (in this case *Setting*) was recognized as the ancient origin of all measure

The sacred bulls designated the various Egyptian cycles: the black *Mnevis* bull of On (Heliopolis) representing the 56-year nodal regression round; the *Apis* bull of Memphis (with white crescent or diamond marking) signifying the 25-year lunar round; and the *Bakh*, *Buchis* or *Bukhe* bull of No (Thebes) – a white bull with black head – representing the 70-year Horus cycle. *A'anefer* (*A'ah* “moon” + *nefer* “swallowed”) – the sacred bull of Erment (*Iun-Mut*) – adopted the theophany of Amon from *Bakh* with the move south from Thebes to Erment.²⁴⁰ Three bulls identified by their markings or epithets (*Apis* ‘the hidden one’) with the underworld – home of Isis whose theophany was the cow – in otherwords, three *unapparent* cycles.

Apis (theophany of the triad – Ptah / Sokar / Osiris) and *Bakh* (symbolic of Horus and Osiris: *A'anefer* resounding *Wen-nefer*),²⁴¹ moreover, appear complementary – which

240 “Ment is represented as hawk headed [*cf.* Horus] and as wearing the headdress of Amen. In Erment his sacred animal was a bull, Bakh, the Bacis of the classic writers; and it appears as if the title ‘strong bull’ [*ie*, longest cycle] borne by the kings of the Theban dynasties was borrowed from this animal. Bacis is designated by the texts as the ‘living soul of Râ,’ that is to say, an incarnation of the god; thus proving that when this name was first bestowed the fusion of Ment with Râ had already been accomplished...The cult of Ment is prominent in many of the later texts; for when Thebes had lost her political and social supremacy Erment became the capital of the district, and many inscriptions relating to Ment, or rather Ment Râ, were then placed in temples at Karnak originally dedicated to Amen and his cycle [*ie*, Ment = Amen: “Since, however, his name seems to be radically connected with Amen, it is possible that both gods were originally identical and only subsequently differentiated.”]. The mention of Ment in the older texts is chiefly confined to figures of speech in which the king is said to be brave as Ment, to have conquered his foes like Ment, and the like; but such expressions afford no data for the understanding of the nature and cult of the deity in question.” [WIEDEMANN, *Religion of the Ancient Egyptians*, pp125–7]

241 “[Osiris] was addressed as *Wen-nefer*, the ‘Beautiful One’, and then became *Khentiamenti*, the ‘Foremost of the Westerners’, as *Amenti*, the West [*cf.* Ment], always represented death and the grave to Egyptians.” [BUNSON, *A Dictionary of Ancient Egypt*, p197]

NOTE Sokar (Seker) ‘the Creator’ was hawk-headed like Horus

suggests their integration in a third figure. *Mendes*, the sacred ram, likewise summoned the spectre of Horus²⁴² (Harpakhrad), while the ram was a conspicuous theophany of Amon (Ment)²⁴³ – also identified as ‘the hidden one’. *Mendes*, in this light, appears to represent the conjunction cycle of the 70-year solar (*Bakh*) and 25-year lunar (*Apis*) rounds: the 3950-year measure, ultimately refined to the 350-year cycle (see p260).²⁴⁴

Thus, before the intrusion of the disruptive Set measure, there were conjecturally four sacred cycles in Egypt: [1] MNEVIS : 56-year; [2] BAKH : 70-year; [3] APIS : 25-year; [4] MENDES : 350-year.²⁴⁵ Four ‘great years’ introduced by

- 242 the Mendean triad: Banaded / Hermehit [Hermes] / Harpakhrad [SYKES, *Everyman's Dictionary of Non-Classical Mythology*, p139] NOTE *Banaded* derives from *Ba'eb Djet* [*Djedet*] “the ancient Egyptian name for the sacred ram of Mendes...a manifestation of Re', Osiris and Ptah....Thoth, the god of wisdom, is supposed to have recommended this practice in ancient times....In later eras the animal stood as a symbol of the great god Amon.” [BUNSON, *A Dictionary of Ancient Egypt*, p41] *djed* = “pillar” (Djehuti = Thoth = Hermehit) cf, p80, fn209
- 243 sheep-headed Ament was the consort of ram-faced Amon (Ment); while Amenti was the entrance to the *Tuat* (Land of the Dead) known as the Place of Reeds, opening into the Elysian Fields; Khentiamenti (Osiris), in this respect, signifies Lord of the West [SYKES, *op cit*, p9]
- 244 both Apis and Bakh cycles interpose an underworld bull between Osiris the father and Horus the son (crescents), presenting similar figures composed of waning and waxing elements – which compound a cycle of ascending and descending intervals
- 245 concerning the 1460-year Sothic Period: “But the interest in Sirius must have been purely symbolical. In the first place, the whole calendar was fictitious, so that it could not be used to predict the rising of the star. In the second place, even with a correct calendar, the appearance of Sirius on the morning horizon and the beginning of the flood could have agreed only by coincidence....This interval was later called the ‘Sothic Period’ and much ink was spent on speculations about the rites connected with it. It was all a later invention; the Egyptians did not use such a period.” [LEY, *Watchers of the Skies*, p15] “The Egyptians, in forming their great year, do not take the moon into consideration; the Greeks call it [this great year] *cynic*, the Latins call it *canicularis*, because it begins at the rising of

Narâm-Sin, whose *Menes* triad (p61) – Hor-Aha / Narmer / Scorpion (waxing crescent / full moons / waning crescent) – is resounded in the *Mendes* 3950-year ‘triad’ (secreted in the Narmer mace-head figure: 1,422,000) – Banaded [Ra / Osiris / Ptah] / Hermehit [Hermes] / Harpakhrad [Horus] – which incorporates both waxing and waning ‘cycles’ with the *addition* of the half-moons, Hermehit and Ptah (the five pivotal visible phases dealing up a full *mende..*).²⁴⁶

We may further speculate that the considerable remains of mummified theophanic birds and animals interred in the Saqqara necropolis across from Memphis, represent a concrete means of maintaining track of elapsed time – the

the Dog Star on the first day of the month which is called by the Egyptians Thot....Also the span of four of their years is shorter than the span of four natural years by, approximately, one day; this re-establishes correspondence on the one thousand four hundred and sixty-first year. This [great] year is also called by some the heliacal year, and by others, ‘the year of the God.’” CENSORINUS, *Liber de Die Natali* XVIII [238 AD] cited (p216) by the author in a chapter devoted to Sirius, adding: “Sirius rises heliacally each summer but on the first of Thot only once (for four consecutive years) in 1460 years; this date, nevertheless, is assumed by modern scholars to have been celebrated yearly as the day of the symbolic rising of Sirius or the day of the Opening of the Year....there is no known instance of an event being recorded by the serial year of a Sothic period. There is no Egyptian document known to mention the Sothic period or to state, ‘In such or such year of the Sothic era’. According to the view predominant at present, the Sothic period is not regarded as an era by which the ancients reckoned the years; it is employed by moderns only as a device to calculate chronological dates. But for that purpose vanishingly few references in ancient texts are available...” [VELIKOVSKY, *Peoples of the Sea*, pp218/9]

- 246 ‘Scorpion’ appears to have been the original name of Osiris, the raised tail of the scorpion prominently visible above its body like the spectre of the waning crescent above the underworld (‘It’, likewise, seems to be an early vocalization of ‘Isis’)

- A NOTE that the Papal edict known as the ‘bull’ (from the Latin *bullā* for “bill”) is also known as an ‘encyclical’ (from the Greek *kuklos* for “circle” or “round”) – the bull representing the ‘great year’ or *cycle* in ancient Egypt, presided over by the high priest
- B NOTE the game of *Monte* (“mountain”) played with 45 cards recalls both the 45-day interval and the initial *Mendes* great year (1,422,000 days ÷ 45 = 31,600 lunations-and-a-half)

repository of 64 mummified Apis bulls discovered in the Serapeum in 1851, arguably projecting a 'retired' count of 1600 years (64×25).²⁴⁷

THE SIGNAL EGYPTIAN LUNATION incorporated 30 days and eight distinct measures: [A] one Goddess, two Shades; [B] a single God making 28 displays at most, with 7 Lamps; [C] three Inclinations; [D] five Beacons; [E] six Realms; [F] seven Lamps; [G] eight Poles; [H] nine Regents. Thus, several numbers present *focal* Egyptian lunar figures,²⁴⁸ whose recurrence in the texts and figurative glyphs of other cultures may signal evidence of a diffusion of lunar

247 "Thus far I have spoken on the authority of the Egyptians and their priests. They declare that from their first king to this last-mentioned monarch, the priest of [Hephæstus], was a period of 341 generations; such, at least, they say, was the number both of their kings, and of their high-priests, during this interval [computed by the author as 11,340 years – three generations per century – apparently without regard to coregencies].... The sun, however, had within this period of time, on four several occasions, moved from his wonted course, twice rising where he now sets, and twice setting where he now rises [*cf.* horizons of the moon].... They led me into the inner sanctuary, which is a spacious chamber, and showed me a multitude of colossal statues, in wood, which they counted up, and found to amount to the exact number they had said; the custom being for every high priest during his lifetime to set up his statue in the temple. ... Their colossal figures were each, they said, a Pirômis, born of Pirômis [*cf.* 'pi'], and the number of them was 345 [*sic*]..." [RAWLINSON, *The History of Herodotus* 11: 142/3, VOL I, p187/8]

248 [A] ISIS-NEPHTHYS (*days 1-2*) one Goddess, twin *aspects*
 [B] ATUM (*days 3-30*) one God assuming 28 *spectres* – 7:28
 [C] *waning/underworld/waxing* (16-30/1-2/3-15) 3 Inclines
 [D] *waxing-crescent/wax-half/full/wan-half/waning-crescent* (3/9/15-16/23/29-30) 5 Beacons: the pivotal spectres
 [E] *dark/wax-crescent/wax-half/full/wan-half/wan-crescent* (1-2/3/9/15-16/23/29-30) 6 Realms: the pivotal stations
 [F] HORUS-THOTH-AMON-RA-SET-PTAH-OSIRIS (3-9-15-16-17-23-29/30) 7 *spectres* or Lamps: the focal gods
 [G] ISIS-NEPHTHYS-HORUS-THOTH-AMON-RA-PTAH-OSIRIS (1-2-3-9-15-16-23-29/30) 8 Poles: the pivotal deities
 [H] ISIS-NEPHTHYS-HORUS-THOTH-AMON-RA-SET-PTAH-OSIRIS (1-2-3-9-15-16-17-23-29/30) 9 Regents: the *Ennead*

insights (like the *eight* antipodal *triads* composing the Taoist symbol of the universe, the *T'ai Chi T'u*).²⁴⁹

The *Yin-Yang* disc at its core, portrays twinned serpents which represent the *polarity* of lunar cycle: a visible (*yang*) spectre looking into the underworld with its black eye; the shadowy (*yin*, or *djinn*) aspect peering out with a white eye. This derives from the Eye of Ra – the goddess (or daylight) *aspect* ('white-eyed' Sekhmet) of the *spectre* Ptah the smith (waning half-moon) – long presumed a 'solar' disc²⁵⁰ from accounts of the Greek Classical and Hellenistic Ages.²⁵¹

Herodotus (*ætat* 24) categorically sought reasonable or plausible explanations for the things he *observed* – the mark of the Classical Age confronted with ancestral myths which were no longer understood – the 'life-giving' disc of the Egyptians readily interpreted in his mind (primed on the naturalistic rationale of the Physical philosophers) as an obvious representation of the sun. While the things he was *told* by the priests had to be translated for him by his 'interpreters' (whom Rawlinson infers "often misled" their guest).²⁵²

249 DRUMBOLIS, *God's Shadow*, pp23/53

"17,000 years before the reign of Amasis, the twelve gods were, they [the priests] affirm, produced from the *eight*: and of these twelve, Hercules is one." (*ie*, 12 months; emphasis added) [RAWLINSON, *The History of Herodotus* II: 43, VOL I, p136]

250 the triangle encompassing the 'All-Seeing Eye of God' – which bears little significance for the cycle of the sun – traces the three Inclinations of the lunar cycle: waning / underworld / waxing

251 Diogenes Lærtius cites the Egyptian belief that Hephæstus was the originator of philosophy and prophecy (p88, fn239); while the epithet *Phæbus* applied to Apollo, was held to signify 'the sun' (*cf*, Herodotus on the origin of the solar year: p18, fn49)

252 RAWLINSON, *op cit* II: 126, VOL I, p179, fn4

"In these matters they say they cannot be mistaken, as they have always kept count of the years, and noted them in their registers. But from the present day to the time of Bacchus, the reputed son of Semelé, daughter of Cadmus, is a period of not more than 1600 years; to that of Hercules, son of Alcmena, is about 900; while to the time of Pan [Mendes], son of Penelopé (Pan, according to the Greeks, was her child by Mercury [Thoth]), is a shorter space than to the Trojan war, 800 years or thereabouts." [RAWLINSON, *op cit* II: 145, VOL I, p189]

Yet the prospect for confirming received impressions and presumptions – afforded only relatively recently with the decipherment of the first hieroglyphs by Champollion²⁵³ – has, by no means, resolved all matters:²⁵⁴ the ‘brilliance’ of Amon and the ‘rising’ spectre of Horus, *etc* (which no one, it appears, has seen the need to reflect upon) describing quite as faithfully, the presentiment of the moon.

The complementary dark Eye of Horus – lost to Set in the fight to avenge his father Osiris, and restored by Isis as a healthy blue (or green)²⁵⁵ eye – was torn in six pieces by Set before being restored (with the help of Thoth, who put the parts together again):²⁵⁶ the six nights between waxing crescent (Horus) and half-moon (Thoth). At this juncture

253 “The first history of ancient Egypt based on actual knowledge of Egyptian texts, rather than simply being a compilation of Greek and Roman works, was J. Gardner Wilkinson’s *Manners & Customs of the Ancient Egyptians*, whose initial three volumes appeared in 1837.” [SILVERBERG, *Akhnaten: The Rebel Pharaoh*, p159]

254 “[Howard Carter] observed that of the true histories of the ancient Egyptians, ‘we have but little which is trustworthy.... The few historical documents that we have are of a very miscellaneous character. An occasional weather-beaten inscription upon a cliff face, a scarab, or a piece of linen, a scrap of papyrus, or a potsherd, which chance has preserved and brought to light. ...Searching those records, it is only here and there that the veil which shrouds those monarchs seems for an instant to be lifted, and we catch a glimpse of some amazing or puzzling fact.’” [SILVERBERG, *op cit*, p158 – citing CARTER, *The Tomb of Tutankh-Amen* VOL III]

255 *wadjet* or “healthy eye” – recalling the term *Uat-Ur* (p83, fn220) translated as “great green” with reference to the sea from which the new moon (or eye) emerges; “In the form of Horus the Elder, the Egyptian *Hor-wer*, Horus’ eyes *were the sun and moon*, and his battle with the god Seth epitomized the eternal struggle between darkness and light, good and evil.” (emphasis added) [BUNSON, *A Dictionary of Ancient Egypt*, pp117/8]

NOTE that the author defers to the consensus – in defaulting to *sun* and *moon* as the spectres symbolized by the eyes – without having considered that the missing or dark eye might represent that of the father Osiris surveying the underworld, while the radiant right eye of the *wadjet* clearly presents the other side of the moon’s ‘face’ turned to the heavens by his son

256 IFRAH, *From One to Zero*, pp210–2

in the cycle, the spectre of the moon begins to 'open' into the convex latitude (or quarter) of the waxing Inclination – inviting the presentiment of a full (restored) eye.²⁵⁷

But the classical Greeks had not been trained to 'see' with these eyes. A legacy of innumerable gods and legendary heroes might have to be preserved (despite the fact that no one could fathom the intentions of forefathers conceiving such nonsense), but the prevailing imperative dictated that the origins of man, his gods, and the world, might only be determined through empirical observation and analysis. A sure sign – among those who had adopted this conceit – that the ancient insights had not survived their preceptors. Heirs to a culture of gods and myths reflecting insights of lunar observation, which had become obscured sometime after the Homeric Age²⁵⁸ – during a period dominated by what appear to have been three cataclysmic disruptions

257 "The divine tribunal ordered Thoth to collect the pieces of Horus's mutilated eye, turn them into a complete and healthy eye by means of his powerful sorcery, and give it back to its owner. The Horus-eye later became one of the most important talismans for the Egyptians...To commemorate the struggle between Horus and Set, which was a divine sign of the victory of good over evil, and to guarantee total vision, universal fertility, and abundant harvests, Egyptian scribes, presided over by Thoth, used the Horus-eye to designate fractions of the *hekat* [4.8 litres] in measures of agricultural products. One day an apprentice scribe pointed out to his master that the fractions designated by the parts of the Horus-eye did not quite add up to 1:

$$1/2 + 1/4 + 1/8 + 1/16 + 1/32 + 1/64 = 63/64$$

His master replied that Thoth would always supply the missing 1/64 to the reckoner who placed himself under his protection."

[IFRAH, *From One to Zero*, pp210–2]

NOTE that the lines of the pictograph for the Horus eye were considered visual symbols of these six fractions: "If the line was to be read from right to left, the value of 1/2 was assigned to the right part of the cornea, 1/4 to the iris, 1/8 to the eyebrow, 1/16 to the left part of the cornea, 1/32 to the oblique colored line, and 1/64 to the vertical colored line." [IFRAH, *op cit*, p208]

258 "Until the birth of Greek science and philosophy in the sixth century BC, Greek explanations of natural and social phenomena were entirely mythical; even thereafter myth remained central

that reduced ancestral Mediterranean enclaves to tatters (747–687 BC)²⁵⁹ – and subsequently preserved as products of a decidedly solar cult. The introduction of movable type – augmented by the retrieval of ancient texts with the fall of Byzantium (1453) – facilitated the Humanist absorption of this solar misconception in the Renaissance synthesis.

And while all things ancient were eagerly devoured at the dawn of the Sceptical Revolution, in hopes of recovering the ancestral knowledge underlying ‘faith’, sustained belief among Neoplatonists, in the *symbols* as well as *structures* of this heritage – such as the nine hierarchies of angels; or ten Sephiroth of Kabbalah – demonstrate that few, if any, even suspected the lunar application (eg. angels as phases) of such figurative mnemonics.

A similar fate befell the Egyptian script a millennium after the Homeric Age, the sacred hieroglyphics reduced to incomprehensibility shortly after the ostensible demise of the Gnostics (ca 375 AD)²⁶⁰ until Champollion’s momentous breakthrough (1822). Yet indications point to the possibility that the ancient insights were recovered and sustained – at centres such as the college of Pythagoras (the *Semicircle*) – with *gnosis* nurtured surreptitiously.²⁶¹

in Greek religion and poetry, and philosophy and science never fully got rid of its influence.” [ENCYCLOPEDIA AMERICANA VOL XIII, p382]

259 VELIKOVSKY, *Earth in Upheaval*, pp273–6

NOTE a major earthquake (7.3) which severely damaged the temple of Solomon, has been dated to 759 BC, according to Duncan Steel, from preceding astronomical events: the solar eclipse of 15 June 763 BC; followed closely by the appearance of a comet (Halley’s?), August 763 BC [STEEL, *Eclipse*, pp19/20]

260 the period of concerted Christian persecution of the Gnostics resulting in the secretion of 13 codices comprising 52 texts from a Gnostic library, recovered at Nag Hammadi in Upper Egypt December 1945 (cf, p216, fn624)

261 “Ultimate truth for the Greeks means the reality which underlies all appearances, and this determines the nature of knowledge of the truth. The Greek ideal of knowledge becomes clear when it is understood that knowing is a kind of seeing [personal visual inspection]...This explains...the importance of mathematics for knowledge...[which] differs from opinion in that it is ‘bound’... what it gives is a lasting possession.” [BULTMANN, *Gnosis*, pp4/5]

Herodotus took the initiative to measure the pyramids himself,²⁶² preserving the details along with the particulars of their erection, as conveyed by his hosts, the Heliopolitan priests. Yet the priests – while disclosing, for instance, that the great pyramid of Khufu took twenty years to complete (a received figure obviously conveyed over a vast interval of time) – imparted nothing of its geodetic significance. Herodotus and subsequent Greek visitors to Egypt – such as Agatharchides of Cnidus (2nd century BC) – however, recognized its northern orientation, and that the measure of its perimeter appeared to denote a fraction of the earth’s circumference (while Agatharchides further suspected that the north / south faces projected a function of π and the other two incorporated the measure of ‘phi’ – ϕ – later known as the Golden Section of the two Leonardos).²⁶³

Yet the account of Herodotus contains clues to a deeper significance which has heretofore remained unrecognized. According to the priests, the reigns of Cheops (Khufu) and Chephren (Khafre) extended 50 and 56 years respectively, yet the modern view allows 23 and 34.²⁶⁴ But the tale they related concerning the pharaoh of the third and smallest of the Giza pyramids – Mycerinus (Menkaure) – preserves a memory of something far more enigmatic.

Mycerinus, they contend, was the son of Cheops (whose reign combined with that of his brother Chephren, is said to have lasted 106 years – fifty years beyond the death of Cheops). Yet they tender no explanation for the puzzling accession of Chephren in place of the son of the departed pharaoh – Mycerinus. Their combined reign, moreover, is described an “affliction of Egypt” – the result of sustained demands on labour and resources to erect the pyramids.

Once Mycerinus ascends the throne, a period of welcome relief ensues, only to be shattered by the tragedy of his dear

262 RAWLINSON, *The History of Herodotus* II: 127, VOL I, p180

263 TOMPKINS, *Secrets of the Great Pyramid*, pp370–5
ie, Leonardo Bigollo Fibonacci da Pisa (1179–1250) and
 Leonardo da Vinci (1452–1519) – Euclid introducing the measure
 in *Elements* BOOK VI [THOMAS, *Greek Mathematics*, pp510/1]

264 Parker Chronology [ENCYCLOPEDIA AMERICANA VOL X, p14d]

daughter's demise. He has her entombed in a golden cow,²⁶⁵ which Herodotus claims to have seen at Saïs – describing “a scarlet coverture; the head and neck, however, which are visible are coated very thickly with gold, and between the horns there is a representation in gold of the orb of the sun.”²⁶⁶ A description of a model of the Apis bull, which was customarily “dressed in elaborate golden robes”,²⁶⁷ and later *preserved* (in the Serapeum).

Given my contention that the Apis bull represented the priestly 25-year lunar round; and the conspicuous 56-year interval of Chephren's reign; it seems more than likely that the colossal undertaking of the pyramids of Giza presents the ancient Egyptian determination to erect monuments as permanent as their sacred cycles: the 70-year Bakh solar round (Cheops); the 56-year Mnevis or nodal regression round (Chephren); and the 25-year Apis or priestly lunar round (Mycerinus).²⁶⁸ Pyramids whose relative sizes reflect

265 “The Egyptians praise him in this respect more highly than any of their other monarchs, declaring that he not only gave his judgments with fairness, but also, when any one was dissatisfied with his sentence, made compensation to him out of his own purse, and thus pacified his anger. Mycerinus had established his character for mildness, and was acting as I have described, when the stroke of calamity fell on him. First of all his daughter died, the only child that he possessed. Experiencing a bitter grief at this visitation, in his sorrow he conceived the wish to entomb his child in some unusual way. He therefore caused a cow to be made of wood, and after the interior had been hollowed out, he had the whole surface coated with gold; and in this novel tomb laid the dead body of his daughter.” [RAWLINSON, *The History of Herodotus* II: 129, VOL I, pp180/1]

266 RAWLINSON, *op cit* II: 129, VOL I, pp181/2

267 BUNSON, *A Dictionary of Ancient Egypt*, p27

268 Saïs was directly south of Buto in the western Delta, near the sacred floating island of *Chemmis* (ruled by Belus) where Isis hid from Set to deliver Horus (p87, fn236). Buto was originally known as *Pe* (cf. *pi*) or *Pe-Wadjet*, because the goddess Buto – who helped hide Isis in the reeds – was also known as *Wadjet* (the name given to the Eye of Horus): her theophany, the cobra or underworld serpent. Horus (new crescent), Belus (8-year) and Mycerinus (25-year) all denoting cyclical renewal, like π . *Chemmis*, no less than *Khem* (Egypt), the etymon for ‘alchemy’.

the relative durations of the cycles. This would explain the priests' sense that Mycerinus was the 'son' of Cheops – the 70-year and 25-year cycles *related* through convergence in the 350-year Mendes cycle. Recall that the priests further revealed that "their *colossal* figures were each, they said, a *Pirômis*, born of *Pirômis*" (p92, fn247).

"Every year" the daughter of Mycerinus was "exposed to the light of day...at the season when the Egyptians beat themselves in honour of one of their gods, whose name I am unwilling to mention in connection with this matter [Osiris, the dying phase]" because she had "requested her father in her dying moments to allow her once a year to see the sun."²⁶⁹ If the 'year' referred to were interpreted as the 'great year' of Apis,²⁷⁰ the meaning would become clearer: at the end of 309 lunations or 25 years, the moon converges with – or 'sees' – the sun (p44, fn127). His 'child' was made a daughter to summon the aspect of the goddess in her capacity as celestial regenerator.

Details of "a second calamity" which befell Mycerinus, support this interpretation. "An oracle reached him from the town of Buto [*Pe-Wadjet*], which said, 'Six years only shalt thou live upon the earth, and in the seventh thou shalt end thy days....For this very reason is thy life brought so quickly to a close – thou hast not done as it behoved thee. Egypt was fated to suffer affliction 150 years – the two kings who preceeded thee upon the throne understood this – thou hast not understood it.'"²⁷¹

The sum of the durations of the three monumental 'years' is 151 (25 + 56 + 70): *ie*, the 'affliction' of incommensurate lunar and solar cycles – which the 'great year' rounds were conceived to redress – disappears in the final year of each round (150 years of 'affliction' – in sum – followed by the 'year' when things improve). The underlying insight of the

269 RAWLINSON, *The History of Herodotus* II: 132, VOL I, pp182

270 recall that the priests took care of the Apis bull for 25 years, then drowned it (p84, fn224)

271 RAWLINSON, *op cit* II: 133, VOL I, pp182

NOTE that Buto was the ancient capital of the north in the predynastic era – when Narmer arrived

oracle's message involves the germinal coefficient of cyclical regeneration: *Horus* as waxing crescent on the third day of lunation. *Wadjet* – the goddess also known as Buto – draws attention to the Horus eye (*wadjet*) which Set managed to cut into six pieces (the six *concave* waxing phases presided over by Horus before the half-moon of Thoth is reached). Mycerinus – third king preceded by two 'tyrants' (the two dark nights separating crescents – 'enslaved' by Apophis, the underworld [*Wadjet* cobra] serpent) – represents Horus, the third phase: avenging paradigm of lunar regeneration.

The colossal wooden statues of successive high priests in the great hall of the Theban temple – preserved to measure elapsed time (p92, fn247) – appear not to have drawn the obvious association with the wooden bull of Mycerinus, in the minds of Herodotus or subsequent scholars. Nor has the term 'Pirômis' – employed by the priests to describe the statues – alerted the prevailing authorities to a connection with pyramidal time measure.²⁷²

As illustrated by Hawkins, "the eighteen most significant celestial positions" of the cycle were aligned with "the 14 key

272 "In Egyptian, this type of tomb, at least in the geometrically true form, was called *m(e)r*, a name which has not been suspected of concealing any descriptive significance. The word 'Pyramid' owes its origin to the Greek *pyramis*, plural *pyramides*, for which a satisfactory Egyptian derivation has often been sought, but in vain. A geometrical term *per-em-us* (literally 'what goes [straight] up from the *us*' – a word of uncertain meaning), which embodies the requisite consonants, is used to indicate the vertical height of a pyramid in an Egyptian mathematical treatise [Rhind Papyrus]. To suppose, however, that *pyramis* was derived from *per-em-us* would imply that the Greeks either mistook the meaning of the Egyptian term or, for reasons unknown, deliberately named the whole structure after the part, by the linguistic process known as 'synechdoche'...*M(e)r*, a pyramid, could belong to the same class of name if it could be established that it was a compound consisting of the prefix *m*, found in Egyptian to convey the meaning 'instrument' or 'place', and the verb '*r*', 'to ascend'...*m(e)r*, would then mean the 'Place of Ascension'." [EDWARDS, *The Pyramids of Egypt*, p218/23] NOTE that the *merkhet* was an astronomical surveying device, while the high priest of Aten at Akhet-Aten was named Meryra (and Akhnaton's eldest daughter, Meritaten)

Stonehenge positions”²⁷³ – demonstrating that the course cycle of the moon could be established by sighting east and west (the Carnac avenues, likewise facilitating the measure of the *shifting* courses of sun and moon). But the phase cycle – concerned with variable measures of time between pivotal phases, as much as the convergence of phase with solar date²⁷⁴ – requires a stakeout of plotted points along the shifting 18.6-year lunar course, to time and ultimately predict phase intervals (ideally at a vantage perpendicular to the east-west course band).

The 70-odd pyramids in Egypt were all erected during the era of the Old Kingdom (*ie*, shortly after the erection of Stonehenge 1). With one exception²⁷⁵ – the so-called

273 RISING POSITIONS: +29° winter moon (high); +24° summer sun; +19° winter moon (low); +5° equinox moon; 0° equinox sun; –5° equinox moon; –19° summer moon (high); –24° winter sun; –29° summer moon (low); and nine corresponding setting sights at Stonehenge 1 [HAWKINS, *Stonehenge Decoded*, p170]

274 although most authorities believe that the ancient astronomers were primarily interested in establishing the mean measure of a lunation, I think they focused their attention on the variability between focal phases, in pursuit of a pattern of recurrences (a command of the impending cycle far more empowering than mere recourse to a mathematical mean) [*cf*, STEEL, *Eclipse*, p77]
NOTE that the difference between longest and shortest intervals separating such focal phases may be more than a day and a half:

1994	CRESCENT	HALF-MOON	INTERVAL
JANUARY	11 (6:10 PM)	19 (3:27 PM)	8 (189:17)
FEBRUARY	10 (9:30 AM)	18 (12:47 PM)	8 (195:17)
MARCH	12 (2:05 AM)	20 (7:14 AM)	8 (197:09) L
APRIL	10 (7:17 PM)	18 (9:34 PM)	8 (194:17)
MAY	10 (12:07 PM)	18 (7:50 AM)	8 (187:43)
JUNE	9 (3:26 AM)	16 (2:56 PM)	7 (179:30)
JULY	8 (4:37 PM)	15 (8:12 PM)	7 (171:35)
AUGUST	7 (3:45 AM)	14 (12:57 AM)	7 (165:12)
SEPTEMBER	5 (1:33 PM)	12 (6:34 AM)	7 (161:01)
OCTOBER	4 (10:55 PM)	11 (2:17 PM)	7 (171:22)
NOVEMBER	3 (8:35 AM)	10 (1:14 AM)	7 (160:39) S
DECEMBER	2 (6:54 PM)	9 (4:06 PM)	7 (165:12)

275 “...the only known instance during the Old Kingdom of such a corridor running from any direction except the north...”
[EDWARDS, *The Pyramids of Egypt*, p68]

Bent Pyramid at Dashur – all ‘passageways’ into them open north: an ideal prospect for observing phases of the moon.

More easily identifiable than the intermediary phases, the conspicuous (pivotal) phases – crescents, half-moons and full moons – were inevitably ‘christened’ with the names of gods,²⁷⁶ to facilitate maintenance of the observation record. The triad of Giza observatories was arguably focused on points in the extended 56-year course cycle, realized after twenty-five, fifty-six and seventy years, respectively.²⁷⁷ The observation rites could commence 25 years into the 56-year cycle, from the small pyramid of Mycerinus (Menkaure) – the *Wadjet* oracle cited by Herodotus (p100) associating him with Horus (rising crescent) – and arguably proceed 14 years beyond the 56-year cycle (or a quarter-cycle) to the phase visible after 70 years, from Khufu: the flanking sights set at points of phase recurrence 56 years from *their* start.

A speculation – given the insuperable durability of their colossal construction – lending to the suspicion that the pyramids were each erected to survey a specific sight over a vastly extended period of time: the 1767-year interval between recurrences of the same phase at the same place in the sky on the same solar date. Sighting focal points on the course cycle would enable the lunar priests to perfect a

NOTE that the Bent Pyramid also has a passage sighting north – this exceptional western access affording an *auxiliary* prospect

276 “The Egyptians likewise discovered to which of the gods each month and day is sacred...” [RAWLINSON, *The History of Herodotus* 11: 82, VOL 1, p153]

277 in this respect, the *meridian* of longitude projected through the Great Pyramid of Cheops (Khufu) by Piazzzi Smyth, might more fittingly be drawn through the axis of the middle pyramid of Chephren (Khafre) – ‘meridian’ signifying “mid-day” although it bears noting that the term may also be said to be composed of the Egyptian word for “pyramid” (*mer*) plus the Greek word for “same” (*idio*) directing attention to the pivot or mid-sight of the common measure of 56 years [SMYTH, *The Great Pyramid*, p79]

A NOTE factoring the three ‘great year’ measures (25, 56 and 70: $25 = 5 \times 5$; $56 = 4 \times 14$; $70 = 5 \times 14$) summons further relations: $70/56 = 1.25$; $70/25 = 2.8$; $56/25 = 2.24$; $56/70 = .8$

B NOTE curiously, the 70-odd pyramids of Egypt appear to be concentrated in 14 distinct localities [EDWARDS, *op cit*, p13]

measured sequence of the phases captive in their scopes at the critical intervals.²⁷⁸

The earliest recorded adherence to the phase cycle, as mentioned (p14, fn37), occurs very shortly after Herodotus returned to Greece from Egypt – in the form of a calendar attributed to Meton.²⁷⁹ Given the date of its inception, the phase with which it appears to have commenced is waxing half-moon (the phase of Thoth – credited appropriately with the invention of measure).²⁸⁰ And since the crescent of Horus was associated with the pyramid of Mycerinus, it further appears that this spectre of Thoth was the phase prospected down the sights of the focal pyramid of Khafre.

Both lunar crescents may vary in appearance from thin to thick (depending on the angle of the moon with the sun

103

278 the nodal regression or course cycle defines the return of the lunar orbit to the same declination of the celestial equator, which does not result in the return of the phases traversing 'that celestial latitude' to the same place in the visible sky, because the *effect* of 'the axial angle of the earth to the ecliptic' differs at different times of the year (a disjunction encountered with both the 18.6-year and '56-year' nodal regression intervals):

"When the moon is approaching her descending node, her path dips down (and her north latitude decreases), and when she is approaching her ascending node her path dips up (and her southern latitude decreases). Further, although the plane of her path can never be more than 5° from the sun's path, she may be much more than 5° from that of the sun's path, at any one time, for she may be at the extreme south of the ecliptic, while the sun is at the extreme north, and *vice versa*. The greatest difference between the meridian altitudes of the moon is twice 5° + 23½° = 57°; that is to say, she may be 5° north of a part of the ecliptic, which is 23½° north of the equator, or she may be 5° south of a part of the ecliptic, which is 23½° south of the equator."

[LOCKYER, *Elementary Lessons in Astronomy*, p171]

279 Herodotus was arguably in Egypt from 460–455 BC (between his 24th and 29th years), while the Metonic calendar is reported to have begun "with 13th Sciophorion (27th June), 432 BC, his first New Moon falling on 16th July" [MAIR, *Aratus: The Phenomena*, 'Introduction', p205]

280 the twenty days between 27 June and 16 July corresponding with the twenty phases between waxing half-moon and 'new moon' (where the term is understood to include 'dark of moon')

at occurrence);²⁸¹ while twin full moons might likewise lead to confusion over the phase appearing in the sighting channel – particularly if it followed a number of stormy nights when the moon were obscured from view. But the half-moon is seldom mistaken (accounting for the clear pre-eminence of Thoth among the ‘focal gods’).

And while the phase cycle proves to be a mere 5 lunations greater than the course cycle, it may have taken the lunar priests no fewer than 4371 lunations (353.4 years)²⁸² – or as many as 21,855 lunations (1767 years)²⁸³ – to arrive at the coveted phase measure, their sights surveying fixed points on the lunar course.

The same phase may recur on the same solar date every 19 years, but not at the same place in the sky. While the lunar cycle may revisit its course of declination every 18.6 years, but the intervals between the appearance of focal phases will not repeat those of the preceding course round.

As mentioned (p79), On or Heliopolis (centre of ‘Atum the Complete One’) – the city roughly across the Nile from the pyramids – was considered the ‘northern pillar’ of the realm, while No or Thebes in the south (renamed ‘City of the Brightness of Aten’ by Akhnaton)²⁸⁴ was arguably its southern complement. The geodetic distribution of focal Egyptian centres – while increasingly recognized – has yet to alert scholars, however, to the figurative lunation reflected along the course of the Nile.

281 also arguably influenced by longitudinal libration – the variable rate of lunar motion about its orbit – and daily libration from the Earth’s rotation [STEEL, *Eclipse*, p89]

282 $18.6 \times 19 = 353.4 \rightarrow 353.4 \times 12.368267 = 4370.9455$

283 $353.4 \times 5 = 1767 \rightarrow 1767 \times 12.368267 = 21,854.727$

284 “...the Temple of Amon was the geodetic centre of Egypt, the ‘navel’ of Egypt, being located where the eastern axis (32° 38’ east) crosses the Nile, at the parallel which is at 2/7 of the distance from the equator to the pole (25° 42’ 51” north), and that the god Amon was identified with the hemispheric stone which marked this point.... The new capital for the god Aten, who was raised to the status of the one true god, was set at latitude 27° 45’ north, at the middle point between the northernmost point Behdet and the southern limit of Egypt at latitude 24° 00’ north.” [TOMPKINS, *Secrets of the Great Pyramid*, p338]

To reiterate, the white crown of the south (waxing aspect) counterposed the red crown of the north (waning aspect), their emblems – soaring vulture and slinking cobra (p65) respectively – complementing the associated theophanies of Horus (rising) at Thebes in the south (p89, fn240) and Set (falling) at Avaris in the north. A geodetic elaboration reflected in the Ben Stone of Anu (On or Heliopolis) – the precursor of the sacred obelisk.²⁸⁵

Egyptian obelisks (*tekhenu*), in fact, appear to have been predominantly concentrated at temple centres like Thebes, Heliopolis and Memphis. While there is no doubt that the gnomon stone or herm was universally employed to gauge the daily passage of the sun, obelisks – generally erected in

- 285 “At a period which is so remote that no date can be assigned to it, the people of Anu...had as the object of their cult a stone, which was thick at the base and tapered to a point at the top.... Why this Ben Stone was sacred, or how it acquired its sanctity, is not known, and it is very probable that the ancient Egyptians themselves never had any clear ideas on the subject. In early dynastic times they thought that it was the abode of the spirit of the sun [*ie*, moon], which made itself visible at the Creation by emerging from the top of the stone in the form of a bird... called the *Benu*...regarded as the incarnation of the soul of Ra [full moon] and the heart of Osiris [waning crescent; *ie*, diverse aspects of a common thing]. It was self-produced [*ie*, cyclical, but unlike the sun or stars – never perceived to be *consumed* – it needed to be reborn, thus the emphasis on regeneration]... The Greeks identified the *Benu* with the Phœnix [‘Benu’ merely a variant vocalization of ‘Phœnix’], a bird which resembled an eagle [vulture] and had parti-coloured feathers, red and golden [red for the underworld of the north, and gold in place of white for the resplendent rising orb]. The home of the bird was somewhere in Arabia [because the waning crescent lingers in the east just before the visible cycle is extinguished], and a phœnix visited Heliopolis at the close of every period of 500 years [the interval of a ‘great year’ cycle]. Towards the end of his life he built a nest in Arabia to which he imparted the power of generation [death *inciting* rebirth], so when he died another phœnix arose out of it. When the new phœnix had grown up he went to Heliopolis and burned his father, whose ashes he buried in the temple of the Sun-god [moon-god] there [the figment of two suns in one place, offending nature unlike the disparate spectres of successive moons].” [BUDGE, *Cleopatra’s Needles*, pp8/9]

pairs – appear suited to a more specific purpose than the mere casting of shadows. Adjoining temples, they present potential measures of alignment: foresight and hindsight projecting an imaginary sightline against the sky. The rear sight was characterized by a capping pyramidion which is perfectly triangular on each face; while the foresight bears convex pyramidal faces – facilitating *superimposition*²⁸⁶ – their focus fixed on a specific point of sky (the celestial spectre being viewed from the heights of the observatory rampart, or temple roof). Clearly *not* sighted, in this manner, into the sun...

Yet most scholars reflexively assert that obelisks were plainly employed to register the movements of the sun²⁸⁷ (while comparable sanctification of the mean village herm throughout the Levant – corresponding with the cult of the sacred obelisk – is conspicuously lacking). *Tekh*, the root of the word for ‘obelisk’ (*tekhen*) – strictly signifying “weight” – may summon the auxiliary concept of *tectonic* “measure” as intimated by the Greek terms *tekhne* (“art”) and *tekton* (“carpenter”): the ‘divined’ or geodetic lay of the land.

286 MOKHTAR, *Thebes of the Hundred Gates*, p46: ‘Obelisk of Thutmosis I’

287 “From the Hyksos period onwards the origin of all forms of religion was sought in sun worship...The obelisks which stood at the entrance of temples were dedicated to the sun...The place round which the solar worship centred was *Ān*, Hebrew On. It was called by the Egyptians *Pa Râ*, ‘the house of Râ’, Bethshemesh by the Hebrews, and by the Greeks Heliopolis....The fact that in Heliopolis it was thought incumbent to worship two embodiments of the Sun god shows that this deity was not considered as one and indivisible, but could be resolved into separate parts, to each of which an independent existence might be ascribed.... In times when it was sought to turn the whole Ancient Egyptian religion into a solar cult, the figure of the sparrow hawk proper was equivalent to the sign for *neter*, “god”, and was also its determinative, in the same way as the figure of the uræus serpent was employed with regard to *neter.t*, “goddess”. We have no information as to how the hawk came to be associated with the sun. *Bak* [*cf. Bakh*, the sacred bull representing the 70-year *Horus* – the hawk – or *solar cycle* (p89)], the Egyptian name of the bird, has no philological connexion with the heavenly body.” [WIEDEMANN, *Religion of the Ancient Egyptians*, pp12/16/17/25/26]

Heliopolis, the city where obelisks were first erected,²⁸⁸ was known as On or Iunu (“pillar”) – mutations of ‘Anu’ (Sumerian sky-god) – which summons the spectre of Juno (*ie*, Juno’s ‘pillar’ or phallic counterpart, Jupiter). And as I have shown, Zeus (Jupiter) is *introduced* in the myths as a symbol of waxing crescent (p87, fn234).²⁸⁹ Thus it appears that pairs of obelisks oriented east-west, may have been aligned to a succession of rising points of the new moon: hawk-headed Horus – the Egyptian theophany of waxing crescent – conceptually embodying the sparrow-hawk Bak of the sacred Ben Stone (or proto-obelisk).

The development of a radical new calendrical measure by the Hyksos, then, which threatened to displace the signal Bel measure of Narâm-Sin – *distinct* solar²⁹⁰ and lunar²⁹¹ calendars rationalized through four ‘great year’ cycles²⁹² – introduced a variable month adaptable to the innovation of a *single* lunisolar calendar extending eight years,²⁹³ at a

288 HABACHI, *The Obelisks of Egypt*, p6

289 “Under the earliest Pharaohs the Egyptian or (Coptic) word for obelisk was *Tekhen*; but after the Twenty-Second Dynasty it was called *Men* [“moon”] which meant *stability*.” [WEISSE, *The Obelisk and Freemasonry*, p5]

recall that Hor-Aha, putative third pharaoh of the First Dynasty – or as I suggest (p61), the Horus aspect of the Menes triad of Hor-Aha/Narmer/Scorpion – was figured as a “fighting hawk” (like Horus, the waxing crescent) whose *nebti* name was *Men*

290 twelve 30-day months plus 5 intercalary days

291 an aggregate of solar years converging with an actual lunar interval every 309 lunations

292 [A] BAKH CYCLE: 70-year 865-month 25,550-day solar cycle – 70 twelve-month 360-day years requiring the intercalation of 35 ten-day ‘weeks’ (an intercalary ‘year’ of 11 thirty-day ‘months’ plus an additional 20 days) – ‘losing’ 960 days every 3950 years

[B] APIS CYCLE: 25-year 309-lunation 9125-day lunar cycle – ‘losing’ 960 days every 3950 years

[C] MNEVIS CYCLE: 56-year 690-lunation 20,376-day nodal regression round (of three 18.61-year 230-lunation 6792-day lunar course cycles)

[D] MENDES CYCLE: 3950 (later 350) years projecting the convergence of the solar Bakh and lunar Apis cycles

293 8-year 100-month 2912-day calendar of 88 twenty-nine day and 12 thirty-day months – ‘losing’ 10 days per cycle

period in Egyptian history when the presiding priests were committed to the long-term divination of the coveted phase cycle of the moon (involving observations protracted over a 1767-year period). In other words, they couldn't possibly be expected to relinquish their observance of an ancient tradition erected on the monumental foundation of such colossal observatories, for the mean advancement of an expedient calendrical measure. The Egyptian priests had embarked on a sacred quest to embrace the actual measure of lunar cycle – a millennial pursuit to which they were indomitably inured. Meaning that the intruders with the new calendar had to take their variable month elsewhere.

LIKE THE PHOENIX an intellectual revolution arose in Greece from the ash of the preceding Dark Age, with the rational generation of Thales (640–550 BC)²⁹⁴ and Solon (ca 640–558 BC).²⁹⁵ The heroic and theogonic temper of an earlier culture (eg, Homer, Hesiod *et al*) was absorbed in a mood of measured reflection aimed at interpreting their literary legacy in terms of the natural world.

As noted (p96, fn259), the century before had sustained three devastating cataclysms (747–687 BC) severe enough to decimate coastal archives throughout the Levant (and Ægean) in which the ancient records reposed, and disrupt transmission of the insights both through the destruction of the colleges and death of the priests.²⁹⁶ Subsequently, as the record reveals, a select few 'semi-legendary' *sages* set off independently for the focal temple centres of Egypt and Babylonia on what appear to have been recovery missions – yet not one of them bequeathed posterity a text of his own. And whatever they retrieved on these journeys seems to have been reserved for the acolytes of the new colleges

294 "Apollodorus in his *Chronology* places his birth in the first year of the 35th Olympiad [640 BC]. He died at the age of 78 (or, according to Sosicrates, of 90 years); for he died in the 58th Olympiad..." [DIOGENES LÆRTIUS I: 38, VOL I, p39]

295 HARVEY, *The Oxford Companion to Classical Literature*, p400

296 the massive devastation of modern Mediterranean earthquakes (up to 7.2 magnitude) substantiating the speculation abundantly [cf, BITTLESTONE, *Odysseus Unbound*, pp3–12]

they established on their return. The rational academies ultimately thrown up in their shadow, however – lacking access to the insights – stuffed a scholarly posture with the most sober inquisitions into Cosmos and Creator, until the actual meaning behind the myths and symbols had become irrevocably immured in relentless hypothesis.

The priests who composed the myths and epics of the Archaic Age, knew what they meant; while those who set off in search of insights (75 years after the tragedy) did not. And while the disrupted network of sacred colleges was being revived (at least in part), the intervening centuries of speculation into the lost legacy, delivered an alternative tradition competing for the interest of the most reflective intellects – a more profane school of thought increasingly candid in its incredulity toward the ancestral mythos.

Thales and Solon were consistently distinguished in the various lists as the foremost of the Seven Sages.²⁹⁷ But, given the expanded numbers of their ‘set’, and the presence of an antecedent collocation of the same name in Egypt,²⁹⁸ there are grounds for speculating that ‘Seven Sages’ may describe the proponents of a select ‘measure’ (*ie*, the Horus-people or ‘veristocracy’) – not that there were seven of them, but that they had been initiated into the key secret of lunar mythology: *that the seven focal lunar phases – or lamps* (p92, fn248) – *unlock the mystery surrounding the gods.*

297 Acusilaus, Anacharsis, Anaxagoras, Aristodemus, *Bias*, *Chilon*, *Cleobulus*, Epicharmus, *Epimenides*, Lasos, Leophantus, Linus, Myson, Orpheus, Pamphylus, *Periander*, Pherecydes, *Pittacus*, Pythagoras, *Solon*, *Thales* – combining lists from Hippobotus; and Hermippus, *On the Sages* (emphasis on focal candidates) [DIOGENES LAERTIUS I: 41/2, VOL I, pp42–5]

298 “These documents [ancient writings used to direct construction of the temple], it seems, had been handed down from the legendary epoch known as the ‘First Occasion’ (also referred to as the ‘First Time’ – *zep tepi*...). It was an epoch, very far away in the past, in which a group of divine beings known sometimes as the Seven Sages and sometimes as ‘the builder gods’ were believed to have settled in Egypt and to have established ‘sacred mounds’ at various points along the Nile...to serve as foundations, and to define the orientation, of temples to be built in the future.” [HANCOCK, *Heaven’s Mirror*, p66]

The Seven Sages – anointed, according to Demetrius of Phalerum, in 582 BC²⁹⁹ – “all applied themselves to poetry” (as Anaximenes is reported saying).³⁰⁰ Yet the prevailing view is that “they were neither sages nor philosophers, but merely shrewd men with a turn for legislation.”³⁰¹ In fact, as early as the time of Herodotus – a century later – their memory had degenerated to rumour and anecdote.³⁰²

The ‘lives’ of Thales and Solon, however, afford clues to their complicity in conveying the lunar insights. Thales is accounted “the first to study astronomy, the first to predict eclipses of the sun and to fix the solstices...the first to determine the sun’s course from solstice to solstice...first to declare the sun to be one seven hundred and twentieth part of the solar circle, and the size of the moon to be the same fraction of the lunar circle.” His only recorded works are “one *On the Solstice* and one *On the Equinox*” (both of course lost).³⁰³ Yet assertions that he “learnt geometry from the Egyptians [and] was the first to inscribe a right-angled triangle in a circle”³⁰⁴ and “had no instructor, except that he went to Egypt and spent some time with the priests

299 DIOGENES LÆRTIUS I: 22, VOL I, p23

300 DIOGENES LÆRTIUS I: 40, VOL I, p41

301 citing Dicearchus [DIOGENES LÆRTIUS I: 40, VOL I, pp41–3]
EDITOR: “The opinion of Dicearchus thus expressed is correct. With the exception of Thales, no one whose life is contained in BOOK I has any claim to be styled a philosopher. The tradition of the Seven Wise Men and of their meeting at some court, whether of a native tyrant like Periander or of a foreign prince like Crœsus, was used by Plato (*Protag.* 343A) and, largely through his influence, grew into a romantic legend, the result being late biographies, collections of apothegms, and letters attributed to various authors, eg the apothegms of Demetrius of Phalerum. Diogenes Lærtius swallows all this as true; modern criticism rejects it all as forgery.” [HICKS, pp42/3, fn a]

302 strange, considering they were purportedly recognized during their lifetimes as the foremost sages of the Ægean...

303 DIOGENES LÆRTIUS I: 23/4, VOL I, p25
cf, Thoth’s gamble with the moon for 1/72 year to accommodate the five children of Nut – Set, Osiris, Isis, Nephthys, elder Horus – the Egyptian mnemonic of their intercalary Epact (p64, fn176)

304 DIOGENES LÆRTIUS I: 24, VOL I, p27

there”,³⁰⁵ lend to the suspicion that his ‘life’ was contrived to epitomize priestly proficiencies.³⁰⁶

While in Egypt he reportedly measured the pyramids,³⁰⁷ and appears to have adopted the belief in immortality.³⁰⁸ And in the first of his two extant letters (to Pherecydes and Solon, respectively) Thales discloses that he had also visited Crete in quest of insights.³⁰⁹ The sole surviving letter from Pherecydes (addressed to Thales) exhorts him to assess and publish his work on the gods – deferring to the counsel of the other sages – conveying the impression of a confederacy of ambient intellects presiding in congress.³¹⁰ Yet the letter

305 DIOGENES LÆRTIUS I: 27, VOL I, pp29

NOTE that the rectangle of Station Stones at Stonehenge I – 91, 92, 93, 94 [HAWKINS, *Stonehenge Decoded*, p65] – aligned to the *extreme* declinations of sun and moon (which will only result in a rectangle of right-angled azimuths at one latitude in the northern hemisphere: 51.17°) involves circumscription of ‘a right-angle triangle on the diameter of the Aubrey Hole circle’ [NEWHAM, *The Astronomical Significance of Stonehenge*, p19]

306 “Timon too knows him as an astronomer, and praises him in the *Silli* where he says: *Thales among the Seven the sage astronomer.*” [DIOGENES LÆRTIUS I: 34, VOL I, p35]

307 “Hieronymus informs us that [Thales] measured the height of the pyramids by the shadow they cast, taking the observation at the hour when our shadow is of the same length as ourselves.” [DIOGENES LÆRTIUS I: 27, VOL I, p29]

308 “...[Thales] was the first to maintain the immortality of the soul” [DIOGENES LÆRTIUS I: 24, VOL I, p25]

“The whole period of the transmigration [of the soul through its cycle of animal rebirths] is (they say) 3000 years.”

[RAWLINSON, *The History of Herodotus* II: 123, VOL I, p177]

309 “For surely Solon of Athens and I would scarcely be sane if, after having sailed to Crete to pursue our inquiries there, and to Egypt to confer with the priests and astronomers, we hesitated to come to you. For Solon too will come, with your permission.” [DIOGENES LÆRTIUS I: 43, VOL I, p45]

310 “I would like you to publish it [after my death], provided that you and the other sages approve of it, and not otherwise. For I myself am not yet satisfied with it. The facts are not absolutely correct, nor do I claim to have discovered the truth, but merely such things as *one who inquires about the gods* picks up. The rest must be thought out, for mine is all guess-work.” (emphasis added) [DIOGENES LÆRTIUS I: 122, VOL I, pp127–9]

– like others among the fourteen extant missives³¹¹ of the ‘Seven’ Sages – is held to be an apparent forgery. Supporting the impression that their ‘heirs’, at least, held the Hellenic contingent of this supernal fraternity to be constitutionally matriculated.

Apart from their identification with the Horus people or ‘builder gods’ (p109, fn298), the Seven Sages are thought by various scholars to represent constellations (the Pleiades, or alternately the Great Bear, *Ursa Major*).³¹² Yet the seven pillars of wisdom, or seven secret passwords to the Tuat, were clearly the seven lamps or focal phases of lunation with which the monthly cycle was *tallied* (or cut). And the Seven Sages of Greece, as it turns out, numbered several

311 witness the letter of Periander addressed to ‘the Wise Men’, in which ‘he’ refers to their convocation the previous year at the Lydian court in Sardis [DIOGENES LAERTIUS I: 99, VOL I, p103]

312 “The convoluted symbolism of the Pleiades or Seven Sisters suggests an extremely archaic tradition. *The importance attached to this small group of dim stars seems out of proportion to their apparent insignificance...* Pre-Vedic India also attached sacrificial significance to the Pleiades, called Seven Mothers of the World, or *Krittikas*, ‘razors’ or ‘cutters’ [cf, Thales → *tailleur*]. They were also seven priestesses who ‘judged’ men – a cognate was Greek *kritikos*, “judge” – and sometimes ‘critically’ wounded them, for their razors were castrating *moon-sickles*... Egyptian texts allude to the Pleiades’ archaic significance as *Krittikas*, judges of men, assigning them also to seven planetary spheres as the seven Hathors. The dead had to speak the names of these Goddesses to pass their ‘critical’ examinations and enter paradise ... The Seven Mothers Who Make Decrees appeared also in Arabia as Seven Sages or *imams* (from *ima*, “mother”).... They were emanations of the Moon-goddess... Artemis personified another set of seven stars, the much larger constellation *Ursa Major*, the ‘Great She-Bear’, who may have been another version of the Seven Sisters. Artemis and Aphrodite both were associated with ancient cults of the Seven Pillars of Wisdom, seven mantic priestesses of Seven-Gated Thebes, where the Seven Hathors once ruled... The same magic seven were called Seven Midwives in Egypt and the Orient. They were probably represented in pre-patriarchal Jerusalem by the holy Menorah (seven-branched candlestick) symbolizing the sevenfold *Men-horæ* or Moon-priestesses...” (emphasis added) [WALKER, *The Woman’s Encyclopedia of Myths and Secrets*, pp803/4]

‘cutters’ or judges (*kritikos*) among them.³¹³ The Archons of Athens graduated, after their term, to ‘the bench’ of the high court of the Areopagus, which they occupied for life – supervising magistrates, education and morality. While the five Ephors of Sparta constituted a supreme judiciary with powers over the hereditary kings (*cf.* ‘Dan’ p83, fn221).

And the corporation of ‘sages overruling kings’ proves to be ‘the rock’ (*ie, luna*) on which the church, like the temple, was founded: “The secret meaning of the seven stars which you saw in My right hand, and of the seven golden lampstands is this: the seven stars [*ie, focal lunar phases*] are the angels³¹⁴ of the seven Churches and the seven lampstands [their nights in the lunation cycle, configured in geodetic array] are the Churches themselves.”³¹⁵

313 SOLON the Archon of Athens whose constitution of 594 BC incited the movement toward democracy introduced by his relation Cleisthenes (507 BC); CHILON the Ephor of Sparta; PITTACUS who deposed the tyrant Melanchrus of Mitylene; BIAS the judge of Priene; PERIANDER the tyrant of Corinth; & MYSON of Laconia (son of the tyrant Strymon)

314 *angelos* (Greek): “messenger” of god – like Hermes/Mercury/Melkarth (*cf. mal’ak*, Hebrew for “angel”) ‘messenger’ of the gods (*ie, Thoth*, the god in Egypt identified with waxing half-moon – the origin of ‘measure’, or ‘phase epitomizing phase-measure’) – in otherwords, *angels are lunar phases*; the ‘fallen angel’ (Satan) clearly an extrapolation of Set, the Egyptian god of the first waning or falling phase in a lunation; the Seven Angels who correspond with the Seven Lamps of the Egyptian firmament (and are equated with the Seven Stars of *Revelation*), being: GABRIEL, MICHAEL, RAGUEL, RAPHAEL, REMIEL, SARIEL, URIEL; while the Four Archangels are GABRIEL (who presides over paradise, thus resembling *Osiris*), MICHAEL (*Melkarth*), RAPHAEL (*Ra*) and URIEL (*Horus*); leaving RA-GUEL (second full moon), SARIEL (*Set*) and RE-MIEL (the ‘miel’ – or MICHAEL – phase *past* Re in the cycle: *ie, waning half-moon, Ptah*)

315 “Write down in a book what you [John of Patmos?] see, and send it to the Seven Churches – to Ephesus, Smyrna, Pergamum, Thyatira, Sardis, Philadelphia and Laodicea!” [PHILLIPS, *The Book of Revelation*, pp2/3]

NOTE that these Anatolian centres are oriented on the map, in two distinct crescents: PERGAMUM, THYATIRA, SARDIS & SMYRNA inscribing an arc resembling waxing crescent; and PHILADELPHIA, EPHESUS & LAODICEA, its waning counterpart

In addition to being credited with the discovery that the angle in a semicircle is a right-angle (p110, fn304), Thales is also cited as “the first to demonstrate that the circle is bisected by the diameter...that the angles at the base of any isosceles triangle are equal [he said “similar”]...that when two straight lines cut one another the vertical and opposite angles are equal” and that distances at sea could be determined with common angles to features on land.³¹⁶ Which suggests that those³¹⁷ who credited him with such pre-eminence either lacked knowledge of Cretan, Egyptian and Babylonian mathematics, or intimated merely that he was the first to introduce previously-recognized geometrical propositions *into Greece*.³¹⁸

Similarly, Thales was ascribed calendrical innovations by highly educated people, which were already recognized in the age of Homer (not to mention throughout other parts of the ancient world) – almost as if the name had *initially* summoned the image of a fraternity (of ‘cutters’ or judges – cf, ‘tally’) *historically* responsible for the preservation and diffusion of the mathematical and astronomical insights at large.³¹⁹ Yet one particular claim³²⁰ lends perspective to his distinctions, measured against a related ‘discovery’ of fellow sage, Solon.³²¹ Thales seems to represent the 30-day month of an earlier diffusion of lunar priests, while Solon appears to symbolize the successive measure of the 29-day month

316 THOMAS, *Selections Illustrating the History of Greek Mathematics*, VOL I, pp165–9

317 Eudemos of Athens (*fl.* 300 BC), Pamphila of Rome (*fl.* 50 AD) and Proclus of Byzantium (411–85 AD)

318 “Thales was the first to go to Egypt and bring back to Greece this study; he himself discovered many propositions, and disclosed the underlying principles of many others to his successors...” [THOMAS, *op cit*, VOL I, p147 – *quoting* Proclus]

319 “[Thales] is said to have discovered the seasons of the year and divided it into 365 days” [DIOGENES LÆRTIUS I: 27, VOL I, pp27–9]

320 “[Thales] was the first to give the last day of the month the name of the Thirtieth...” [DIOGENES LÆRTIUS I: 24, VOL I, p25]

321 “Solon was the first to call the 30th day of the month the Old-and-New day...” [DIOGENES LÆRTIUS I: 58, VOL I, p59]

(the “Old-and-New day” signifying that the thirtieth day was perceived to be half in the old month and half in the new – ‘half-day measure’ long a calendrical commonplace in ancient reckoning).³²² Arguably corresponding with the 29-day Set measure of the Hyksos which threatened the 30-day Horus measure of the Egyptians, developing into the 8-year (29-day) Dan measure before their precipitous removal to Canaan – where the Bran measure arose (p88).

Thales and Solon, alike, are thus memorialized as having derived their insights from Egypt (where both measures initially competed), while Thales – *epitomizing* the ancient compact of lunar ‘cutters’ – is appropriately represented as having come from Tyre, where the Hyksos first retreated from the persecution of Seti I.³²³ In other words, the conflict of the competing measures was introduced from Tyre.

322 “To the question which is older, day or night, [Thales] replied:

‘Night is the older by one day.’” [DIOGENES LÆRTIUS I: 36, VOL I, p37] “The following riddle of Cleobulus is preserved in Pamphila’s collection: *One sire there is, he has 12 sons, and each of these has twice 30 daughters different in feature; some of the daughters are white, the others again are black; they are immortal, and yet they all die.* And the answer is, *The year.*” (emphasis on “twice”) [DIOGENES LÆRTIUS I: 91, VOL I, p93]

323 “Herodotus, Duris and Democritus are agreed that Thales was the son of Examyas and Cleobulina [daughter of Cleobulus?], and belonged to the Thelidæ [*var*, Nelidæ] who are Phœnicians, and among the noblest of the descendants of Cadmus and Agenor....He was admitted to citizenship at Miletus when he came to that town along with Nileos, who had been expelled from Phœnicia.” [DIOGENES LÆRTIUS I: 22, VOL I, p23]

A NOTE that ‘Examyas’ appears to combine the terms ‘Hyksos’ and ‘Chemmis’ – drawing a pointed connection between the seats of Belus (Chemmis) and his twin Agenor (Tyre), progenitors of the underworld measures arising from the Set count of their father, *Poseidon*. Which is fortified by the *elemental* precept attributed to Thales: “His doctrine was that *water* is the universal primary substance, and that the world is animate and full of divinities [*ie*, many gods, not one].” [DIOGENES LÆRTIUS I: 27, VOL I, p27]

B NOTE also that Thales is reported as migrating to Miletus, Caria (*cf*, Car moon-god) after the expulsion of his companion *Nileos* from Phœnicia – which recalls Anchinoë the daughter of Nilus, wife of Belus and mother of the Danaïds (the *flight* of the 8-year Dan measure from Phœnicia precipitated by Rameses II) *cf*, p79

The period after the putative cataclysms of 747–687 BC, in which the generation of Thales and Solon flourished, also witnessed the rise of tyranny throughout the Ægean – a revolutionary ‘movement’ aimed at supplanting the rule of the hereditary elite. A phenomenon conventionally held to have been sparked by the restivity of a new class risen with the prosperity of expanded trade and colonization, it remains to be appreciated that the tyrants may have based their opposition to the presiding aristocracy on *measures* other than wealth. Nor has it been conjectured that they may also have ‘come’ – like Thales – from Tyre.³²⁴

Kypselos – father of Periander – who introduced tyranny to Corinth (around 654 BC) was purportedly “the son of a daughter of the governing clan by a non-Dorian father, to whom she had been married off because she was lame and no nobleman would take her”.³²⁵ Periander’s wife Lysida, on the other hand, was the daughter of Procles, tyrant of Epidaurus. Pittacus – another of the Sages – who defeated Melanchrus of Mitylene, as mentioned (p113, fn313), not only assumed the rule of Lesbos for the next ten years, but also named his son Tyrræus. While fellow sage Myson of Laconia was the son of Strymon, tyrant of Sparta.

Thales prevailed under the rule of Thrasybulus, tyrant of Miletus; while Solon – “kinsman” of Pisistratus, tyrant of

324 “Leaders, often though not always dissident nobles themselves... were the *tyrannoi* or tyrants, a non-Greek word (and apparently not Lydian either, though Gyges is the first man to whom we find it applied). It was not originally pejorative. It was an informal title meaning ‘Boss’ or ‘Chief’, and was properly used of revolutionary despots; it would be applicable to Cromwell, Napoleon, Stalin or Idi Amin, but not to even the most blood-thirsty of hereditary kings.” [BURN, *The Pelican History of Greece*, p98]

325 BURN, *op cit*, p99

NOTE that the ‘lameness’ of Œdipus symbolizing the ‘staggered’ calendrical measure of alternating 29-day and 30-day months, impels the speculation that the ‘ignoble’ union of Periander’s lame grandmother appears to memorialize a *relation* among rulers of ‘the presiding 30-day Greek measure’ and ‘the radical variable alternative’ (ie, the 8-year calendar of 88 twenty-nine-day and 12 thirty-day months) arguably imported by Tyrian fugitives from the relentless onslaught of the advancing Egyptians

Athens³²⁶ – enacted reforms consonant with tyranny, and subsequently removed (despite his democratic advocacy) to Sardis and the court of Crœsus, tyrant of Lydia, following his notorious displacement by Pisistratus.

As stated, the earliest tyranny recorded was that of Gyges of Lydia (685–652 BC), founder of the Mermnadæ dynasty – supplanting the Heracleidæ of Myrsilus – which ended with Crœsus (560–546 BC). Oval electrum coins from the reign of Gyges (presumably) remain the earliest examples of minted coinage extant – one source, it is assumed, of the fabulous accounts of the wealth of Crœsus.

It is notable, moreover, that the introduction of tyranny throughout the Ægean appears to have coincided with the last of the three putative cataclysms (687 BC). Yet the name ‘Gyges’ presents a further convergence supporting a thesis of ‘tyrannical diffusion’ – the “giant” in his name (*cf.* *gigas*, Hebrew) proving synonymous with Anax, legendary king of Anactoria (ancient Caria) and father of giant Asterius; and Anak, father of the giants known as the Nephilim.³²⁷ As detailed in an earlier work,³²⁸ ‘Anak’ is also cognate with ‘Enoch’ – eldest son of Cain and founder of the ‘first city’, which was named after him (*cf.* Anactoria). And ‘Enoch’ is further cognate with ‘Enki’, Sumerian water god – the first Poseidon (decanting the elemental distillate of *water* upon which Thales claimed the universe was primed). In other-words, the kingdom of Caria – adjacent to Lydia – which had been ruled by ‘giants’,³²⁹ was occupied by a radical new element superior in magnitude to that of its predecessor.

Asterius had a namesake in the husband of Europa – stepfather to Minos, Rhadamanthus and Sarpedon – while

326 “[Thales] lived, as Minyas relates, with Thrasybulus, the tyrant of Miletus.” [DIOGENES LÆRTIUS I: 49, VOL I, pp29/51]

327 NUMBERS XIII: 29–33 (*cf.* Nelidæ)

328 DRUMBOLIS, *Shrouded in Scripture*, pp54/5

329 those not only capable of erecting the colossal temples and towering sighting stones, but also ‘tall’ enough, or near enough to the gods, to comprehend the meaning of their enigmatic signs – like the giants credited with the construction of Stonehenge – the antecedent installment of astronomer priests united in their observance of the original 30-day Bel month of Narâm-Sin

Miletus, the son of Apollo and Dione, was said to have removed to Caria from Crete to establish his new seat of Miletus – displacing Anax and his gigantic son Asterius – the ultimate home of Thales of Tyre (and birthplace of the new discipline of philosophy). And Europa, queen of Crete and consort of Zeus, likewise personifies dislocation from Tyre.

The Phoenician port cities of Tyre³³⁰ and Sidon reflect the geodetic polarity of Thebes (No) and Heliopolis (On) in Egypt – southerly Tyre (Taurus) representing the waxing arc of the cycle, while northerly Sidon (Set-tan) surveyed the verges of Poseidon's *netherworld*³³¹ (the viper's lair and watery precinct of the dead – *thanatoi*). And it was from Tyre that Zeus, the supreme god of a new pantheon, *swam* to Crete with Europa – daughter of King Agenor of Tyre – on his back, disguised as a white bull (Taurus) with a black patch between his horns.³³²

The primordial pantheon of the Greeks comprised seven Titan gods³³³ – Ocean, Coeus, Eurymedon, Hyperion, Crius,

330 Sûr (Lebanese), Sôr (Hebrew), Sur(r)u (Assyrian), Tyros (Greek), Daru (Egyptian)

331 "...the figure of the sparrow hawk proper was equivalent to the sign for *neter*, 'god', and was also its determinative, in the same way as the figure of the uræus serpent was employed with regard to *neter.t*, 'goddess.'" [WIEDEMANN, *Religion of the Ancient Egyptians*, p26]

332 initially representing the waxing crescent (p87, fn234), Zeus here embodies the regenerative aspect of lunation – his horns terminal crescents separated by the telltale 'dark divide' representing the interval of darkness preceding every lunation ["gem-like horns, between which ran a single black streak" — GRAVES, *The Greek Myths*, p194] – summoning an image of the familial triad of Egyptian iconography: Osiris/Isis/Horus

NOTE that Crete is appropriately situated in the west where the waxing crescent of the new lunation commences its 'reign'

333 "Next, the goddess created the seven planetary powers, setting a Titaness and a Titan [ΤΙΤΑΝΩΣ — APOLLODORUS 1.1:3, VOL 1, p4; cf. ΤΥΡΑΝΝΩ] over each. Theia and Hyperion for the Sun; Phoebe and Atlas for the Moon; Dione and Crius for the planet Mars; Metis and Coeus for the planet Mercury; Themis and Eurymedon for the planet Jupiter; Tethys and Oceanus for Venus; Rhea and Cronus for the planet Saturn." [GRAVES, *op cit*, p27]

Iapetus and Cronus – paired with seven Titanides (Tethys, Rhea, Themis, Mnemosyne, Phoebe, Dione and Thia).³³⁴ Eurymedon, however, was excluded from the early lists of Hesiod and Apollodorus, both incorporating *six* male and seven female deities: the seven focal Lamps of the Egyptian pantheon (p92, fn248) minus Set; with a goddess (or daylight counterpart) for each focal phase, plus an additional goddess presiding over the nights without a moon in the sky. The elevation of Typhon (Set) to *focal* status in the Hyksos heaven occasioning the inclusion of Eurymedon³³⁵ to the Titan host, with the introduction of the Set measure to Phoenicia.³³⁶

Uranus, father of the Titans, had relegated their siblings – the *Hekatocheiras* (or “100-handed”)³³⁷ and the *Kuklopes* (the “cycle-eyed” Cyclopes) – to Tartarus in Hades, a fate his youngest son Cronus perpetuated after castrating him. Which inevitably draws attention to the infernal syllable of

334 APOLLODORUS 1.1:3, VOL 1, p5

335 *Eurymedon* translated as “wide rule” – *ie*, the nightly reign of the dominant phases having been widened by one focal phase [GRAVES, *The Greek Myths*, p761]

336 “When the gods had overcome the giants, Earth [Γη], still more enraged, had intercourse with Tartarus [the underworld] and brought forth Typhon in Cilicia, a hybrid between man and beast.... One of his hands reached out to the west and the other to the east, and from them projected a hundred dragons’ heads. ... But when the gods saw him rushing at heaven, they made for Egypt in flight, and being pursued they changed their forms into those of animals.” [APOLLODORUS 1.VI:3, VOL 1, pp47–9]

337 “Sky [Οὐρανός] was the first who ruled over the whole world. And having wedded Earth [Γην], he begat first the Hundred-handed, as they are named: Briareus, Gyes, Cottus, who were unsurpassed in size and might, each of them having a hundred hands and fifty heads.” [APOLLODORUS 1.1:1, VOL 1, p3]
NOTE that the sum of their heads amounts to 150, which recalls the period of affliction prophesied by the oracle of Buto, equal to the sum of Egypt’s three ‘great years’ (25 + 56 + 70) minus the final year of ‘relief’ (p99, fn271) – suggesting that Briareus, Gyes and Cottus represent the pyramids of Giza (a speculation supported by their Cyclop siblings: Brontes, Steropes and Arges – symbolizing strength, energy and craft – characterized as the architects and smiths of the pantheon)

“death” (*thanatos*) in the term ‘Ti-tan’, resounded in the Dan measure of the 8-year 100-month calendar.³³⁸ ‘Great year’ measures were perceived to ‘reside’ in the underworld because of their ‘invisibility’ (cf, Apis, ‘the hidden one’) – the 8-year calendar fittingly accorded ‘great year’ refuge.

Set, lord of the waning half of the cycle, ruled the underworld from the greatest height of all the deities who might lay claim to the ‘infernal’ throne. And with his rise to the status of focal deity, the Set measure projected a revised model of the traditional pantheon requiring the addition of an extra god (Eurymedon). This Dan measure prevailed through two 8-year calendars (the 99-month variant here identified as the Bran measure, in accord with Abram’s age – 99 – when he introduced the eighth letter into his name), both conspicuously in conflict with the traditional Horus / Apis measures of the colonies of Narâm-Sin. In Greece, a new pantheon³³⁹ introduced the 8-year 99-month Danaïd measure, ultimately installing a tyrannical new priesthood.

338 the 100-month variant of the 8-year calendar detectable in the 100-handed *Hekatocheiras* and the 100 dragons’ heads radiating from Typhon’s hands

339 CRONUS + RHEA → HESTIA, DEMETER, HERA; HADES, POSEIDON, ZEUS (3 girls; then 3 boys, in the above order) – the OLYMPIAN pantheon composed of 13 deities (like the initial TITAN pantheon, though *it* comprised 6 gods and 7 goddesses) including the 6 children of CRONUS and 7 children of Zeus (both youngest sons because they each originally embodied waxing crescent initiating their respective measures):

ARES (ZEUS + HERA)	<i>Horus</i>	APHRODITE (Z + Dione)
HERMES (ZEUS + Maia)	<i>Thoth</i>	HESTIA
APOLLO (ZEUS + Leto)	<i>Amon</i>	ARTEMIS (ZEUS + Leto)
ZEUS	<i>Ra</i>	HERA
POSEIDON	<i>Set</i>	DEMETER
HEPHÆSTUS (Z + HERA)	<i>Ptah</i>	ATHENA (ZEUS + Metis)
HADES/PLUTO	<i>Osiris</i>	

NOTE that Hades embodies a duplex spectre bearing separate names – the ‘extra’ crescent making *Pluto* “wealthy” – to accommodate the alternating 29- and 30-day months (cf, p88, fn239) [‘Dione’ is the feminine of ‘Zeus’; Maia was the daughter of Atlas (son of Titan Iapetus); Leto the daughter of Titans Coeus and Phoebe; Metis – styled Titaness – was the first wife of Zeus (whom he devoured), Athena springing from his forehead...]

It must be appreciated that this revolutionary new Dan measure represents the first attempt to unite the *separate* calendars regulating solar (Horus 70-year round) and lunar (Apis 25-year round) convergence. The advancement of a *single* lunisolar calendar required the replacement of the traditional Bel measure of the 360-day year (incorporating twelve 30-day months needing 5 intercalary days), with the radical innovation of the Set measure of a 364-day year (of eleven 29-day plus one-and-a-half 30-day months pausing for a single intercalary day). But the Hellenic Dan measure sustained the presentiment of ‘many deities’ (focal phases) where the Hebrew Bran measure which developed from it, *adapted* the Aten epiphany of a singular god.

Tartarus, the father of Typhon (Set) and gatekeeper of the underworld – suggesting ‘double-bull’ (Taurus-Taurus) – epitomizes the ‘great bulls’ of the netherworld (Apis, Bakh and Mnevis). He restrains ‘the 100-handed’ for Cronus and with Gaia, propagates the focal god of the Hyksos, Typhon (trailing 100 dragons’ heads). Which confirms the initial 100-month 8-year calendar as the *original* ‘great year’ of the Set measure. And its inception appears to be concentrated in Cilicia, home of the Taurus and Anti-Taurus mountain ranges (drained by the mighty Pyramus River).³⁴⁰

- 340 *Pyramus and Thisbe* proving, on closer inspection, to be a myth of lunar ‘demise’: the bloodied veil of Thisbe (the goddess *veiled* in the underworld) provoking Pyramus (Osiris, who is merely Set in his final fatal form) to kill himself (with blade-like crescent) and descend into her domain to be together...

NOTE that Pyramus is a Court Astronomer (like his father) while Thisbe is the daughter of Martuma the wealthy merchant – *Mar-tu* being the Sumerian term for the Amorites, Amurru or Amu who established the Babylonian culture and controlled Syria from Byblos (just north of Sidon) from about 2050 BC – centre of the Middle Eastern bronze trade (*cf.* Narâm-Sin)

“The conclusion can hardly be avoided that ‘*amw*’ designates the Amurrite population of Syria-Palestine in the Middle Bronze Age. Furthermore, the fact that the foreign population of Egypt and its leaders in the Hyksos period is called by the same terminology strongly suggests that the Egyptians recognized a direct ethnic and cultural continuity in these foreigners with those of Syria-Palestine...” [VAN SETERS, *The Hyksos*, p189]

According to myth, the Tyrian tide of the '100-handed' Set measure – propagated by Agenor king of Tyre – swept into Greece with Europa and Cadmus from Phœnicia, as the related 99-month Danaan wave was steeped in Egypt on Agenor's twin Belus (father of Danaüs). Radical new currents vying for control of a crucial Bel outpost.³⁴¹

- 341 "As for the Pelasgi, almost all agree, in the first place, that some ancient tribe of that name spread among the whole of Greece, and particularly among the Æolians of Thessaly. Again, Ephorus says that he is of the opinion that, since they were originally Arcadians, they chose a military life, and that, in converting many peoples to the same mode of life, they imparted their name to all, and thus acquired great glory, not only among the Greeks, but also among all other peoples whithersoever they had chanced to come. For example, they prove to have been colonisers of Crete, as Homer says...And Thessaly is called 'the Pelasgian Argos'...on account of the fact that the Pelasgi extended their rule over these regions. Further, the Dodonean Zeus is by the poet himself named 'Pelasgian'...And many have called also the tribe of Epirus 'Pelasgian', because in their opinion the Pelasgi extended their rule even as far as that. And, further, because many of the heroes were called 'Pelasgi' by name, the people of later times have, from those heroes, applied the name to many of the tribes; for example, they have called the island of Lesbos 'Pelasgia', and Homer has called 'Pelasgi' the people that were the neighbours to those Cilicians who lived in the Troad...But Ephorus' authority for the statement that this race originated in Arcadia was Hesiod; for Hesiod says: 'And sons were born of god-like Lycaon, who, on a time, was begotten by Pelasgus.' Again, Æschylus, in his *Suppliants*, or else his *Danaan Women*, says that the race of the Pelasgi originated in that Argos which is round about Mycenæ. And the Peloponnesus too, according to Ephorus, was called 'Pelasgia'. And Euripides too, in his *Archelaus*, says: 'Danaus, the father of fifty daughters, on coming into Argos, took up his abode in the city of Inachus, and throughout Greece he laid down a law that all people hitherto named Pelasgians were to be called Danaans.' And again, Anticleides says that they were the first to settle the regions round about Lemnos and Imbros, and indeed that some of these sailed away to Italy with Tyrrhenus the son of Atys. And the compilers of the histories of *The Land of Atthis* give accounts of the Pelasgi, believing that the Pelasgi were by the Attic people called 'Pelargi', the compilers add, because they were wanderers and, like birds, resorted to those places whither chance led them." [STRABO v: ii.4, VOL II, pp343–7]

Evidence of the introduction of Narâm-Sin's antecedent Bel measure throughout the Ægean, survives not only amid ancient memories of a distant Pelasgian³⁴² ancestry, but also in the myths of Pelagon, Peleus, Pelias and Pelops (with Belus their echo); as well as a host of El diminutives – including Hellen, son of Deucalion, legendary progenitor of the ancient Greeks.³⁴³

Pelagon was king of Phocis (home of Mount Parnassus and Delphi) when Cadmus arrived – his cowherds selling the wayward Phœnician prince the “cow with a white full

342 *Pelasgi* = *Belasgi*; while *Pelargi* as *Bel-argi* affords a possible insight into the origin of the word in Greek for “pelican”: *pelargi* – *arge* signifying “brightness” – ‘the brightness of Bel’ equated with *wandering*; summoning the wandering cycle of the Bel measure which required a ‘great year’ calendar to follow (the Pelasgians, Pelargians or ‘veristocrats’ characterized like Gilgamesh and Moses as ‘wanderers’ because they boundlessly compiled data in pursuit of the moon’s *extended* cycle); *Pelargi* – ‘the brightness of Bel’ – furthermore, recalls the title given by Akhnaton to No or Thebes four years into his reign: ‘City of the Brightness of Aten’ (*cf.* Athens)

A NOTE in this regard, that the name of Ninsun, the mother of Gilgamesh, is resounded in that of king Ninus (in the Pyramus myth), who is married to Semiramis (half-moon; *cf.* *ram* in Ra, Narâm-Sin, Aram, Ab-ram, Rameses, Pyramus) the daughter of Ataryatis (Syrian fish-god) and Oannes (Babylonian god of wisdom – the precise attribute of Ninsun) – Atar, Zoroastrian genius of fire, symbolizing the ninth day of the *month*, on which the half-moon appears (*ie*, Semi-ramis; *cf.* Ninus) – though she was earlier married to Menon (*cf.* Menes = Narâm-Sin) by the shepherd Simmos, who ‘raised’ her (Sin + Mose = “moon-diviner” as ‘shepherd’ – like the divine father of Gilgamesh, Lugalbanda)

B NOTE further that this may settle the controversy surrounding identification of the Hyksos as ‘shepherd-kings’ (Manetho’s sense of Egyptian *hka haswt*, which John Van Seters renders “ruler of foreign lands” — *The Hyksos*, p187) and the significance behind the Hebrew patriarchs characterized as ‘shepherds’

343 ELEA, Electra, *’Eleleus*, ELEUSIN, *Eleutherius*, *Elicius*, ELIS, Elissa, Elpenor, ELYSIUM, Helios, HELLAS, *et al* (small capitals denoting place-names; italics, titles of Dionysus – *’Eleleus* – and Zeus [“The name is apparently from a root meaning ‘bright’...” HARVEY, *The Oxford Companion to Classical Literature*, p453] – *Eleutherius* ‘the Liberator’; *Elicius* ‘he from whom a heavenly sign is called forth’) NOTE Helios clearly ‘bright’ like *lunar* Zeus

moon on each flank”³⁴⁴ which led him to the spot near the Spring of Ares upon which he founded seven-gated Thebes. Having killed the great serpent (Apophis – *cf.* p82, fn218) which guarded the spring, Cadmus consecrated the site to Athena (*cf.* Aten) who subsequently directed him to sow the serpent’s teeth in the ground. From these sprang the *Spartoi* (“sown men”) who fought amongst themselves at the toss of a stone (*luna*) until only five survived.³⁴⁵ Ares, demanding retribution from the gods for the death of the serpent, forced Cadmus into bondage “for a Great Year” – a confinement extending eight years.³⁴⁶

The ensuing marriage of Cadmus to Harmonia (daughter of Ares and Aphrodite) is characterized as “the first mortal wedding ever attended by the Olympians”,³⁴⁷ introducing a foreign element into the pantheon – also encountered in the marriage of Peleus to Thetis – the new gods inclined to ‘mortal’ intercourse (not unlike Akhnaton) to distinguish the ‘progeny’ of their new measure (introduced by a foreign priesthood of near-memorable mortals), from the wholly divine figures of remotest antiquity. Achilles (*cf.* Akki), seventh son of Thetis and Peleus (the second son of Æacus king of Ægina), alone remaining mortal among their sons

344 GRAVES, *The Greek Myths*, p195

345 Echion, Udaëus, Chthonius, Hyperenor and Pelorus [Bel-Horus] symbolizing the five intercalary days of the ‘defeated’ 360-day calendar – Set, Osiris, Isis, Nephthys and Horus the Elder – which appears to present the Spartans as late adherents of the Bel measure, converted by Cadmus [GRAVES, *op cit*, p196] NOTE that the ‘sown men’ summon the antecedent of Pelasgus, ‘the first man’, springing from the teeth of Ophion the serpent (created by Eurynome the Great Goddess, by rubbing the north wind, Boreas, in her hands); Ophion impregnated Eurynome, begetting the Universal Egg which he encircled seven times before it hatched and split in two – disclosing the waxing and waning arcs of lunar cycle [GRAVES, *op cit*, p27: *Pelasgian creation myth*]

346 Ares or Horus represents the waxing crescent, appropriately risen as ‘from a spring’ (following the two nights during which the moon has been forced by the serpent to reside in the *waters* of the underworld); Cadmus in bondage *eight years* to link him (and the alphabet) to the 8-year calendar [GRAVES, *op cit*, p198]

347 GRAVES, *op cit*, p198

– despite the Fates’ prophecy “that any son born to Thetis would become far more powerful than his father”³⁴⁸ – as a result of the intervention of Peleus during Thetis’s ritual “burning away” of his mortal parts (phases).³⁴⁹

The seventh son summons the seventh focal spectre of the Egyptian pantheon – Osiris – conspicuously prone to mortality and submergence in the underworld. Thetis the Nereid, Poseidon’s sister-in-law and daughter of Nereus, old man of the sea – making her home in the depths of the underworld (like Isis) – received her son Achilles (*cf. aqua*) into her watery abode on his demise.

Peleus, it bears noting, was the king of Phthia (or *Thebæ Phthiotides* – Thessalian Thebes – in the district known as Pelasgiotis);³⁵⁰ placing him in company with Cadmus king of Bœotian Thebes. His father Æacus (the son of Zeus and Ægina) was identified by Homer as one of the judges of the underworld (beside Minos and Rhadamanthus) – equating him with Sarpedon (the serpent). While the repopulation of his island of Ægina was conducted by Zeus with ants – *ie*, denizens of underground – transformed into humans known as Myrmidons (a term like ‘Sarpedon’ whose ending arguably memorializes the introduction into Ægina of the underworld-ordered Dan measure).³⁵¹ And Æacus may be readily identified with the antecedent measure of Narâm-Sin, by name (*cf. Anak/Enoch*, p117) – Ea another name for Enki, the Sumerian water-god.³⁵²

348 GRAVES, *The Greek Myths*, p270

349 lunar phases figured as *mortal* because they are extinguished; lunar cycle, *immortal* because it recurs [GRAVES, *op cit*, p272]

350 Pelasgiotis was also the name of Peloponnesus before Pelops renamed it [APOLLODORUS *Epitome* II: 9, VOL II, p163]; the even earlier name, Apia (of the Apidanians – *cf.* p84, fn225), resounding relations with the antecedent priesthood of the Apis ‘great year’ measure [APOLLODORUS II. i: 1, VOL I, p129]

351 the Set measure on which the 8-year Dan calendar was based, introduced the radical concept of variable 29- and 30-day months, whose staggered duration would proceed from the terminal or underworld phase (of Osiris, or Set in his final form): *ie*, either the 29th or 30th day of lunar cycle (thus Hades/Pluto)

352 emphasizing derivation from the divine legacy of the *original* lunar priesthood of the extended measure (thereby, *authority*)

Pelops – son of Tantalus³⁵³ and brother of Niobe³⁵⁴ – “after being slaughtered and boiled at the banquet of the gods, was fairer than ever when he came to life again, and on account of his surpassing beauty he became a minion of Poseidon”.³⁵⁵ Demeter,³⁵⁶ goddess of rebirth (like Isis), ate his shoulder (*ie*, waning crescent) which was replaced with one of ivory when he was restored to life. In other-words, the antecedent Bel measure was refurbished and made more beautiful (*ie*, superior) with an artificial tusk (or crescent which could be removed): the variable month of the Dan measure. And Agamemnon and Menelaus – the Mycenaean and Spartan commanders in the Trojan War – were the eminent grandsons of recombinant Pelops.³⁵⁷

Meanwhile, Poseidon, the admirer of Pelops, lost himself further to Tyro, daughter of Salmoneus (the son of Æolus and grandson of Deucalion, the Greek Noah). Disguised as the River Enipeus (in Thessaly) he watered her with sons – Pelias and Neleus – before her uncle Cretheus (brother of Salmoneus) had his way, siring their half-brother, Æson. Pelias usurped the throne of Iolcos in Thessaly, however, which was rightfully Æson’s, agreeing to relinquish it to Æson’s heir, Jason, on the condition that he retrieve the golden fleece of the sacred ram which bore Tyro’s cousins Phrixus and Helle from Thebes to Æea (Colchis).

Pelias – a conspicuous projection of the Bel measure of Tyre and Sidon (Tyro + Poseidon) – assumes the role of

353 confined to Hades by the gods, Tantalus resounds the under-world Dan measure in name: *than[atos]* + tally

354 Niobe had a namesake in the sister of Apis (p125, fn350) – the children of Phoroneus (son of Inachus of Argos, and brother of Io) – who was the mother of Argus (by Zeus: “...she was the first mortal woman with whom Zeus cohabited...”) and by one account, of Pelasgus [APOLLODORUS II.1:1, VOL I, p129]

355 APOLLODORUS *Epitome* II: 3, VOL II, p157

356 ‘Demeter’ (a mate of Poseidon) derives from ‘Tiamat’ – *diameter* – responsible for dividing heaven from underworld (*cf*, p30, fn89)

357 ‘Peloponnesus’ signifying “island of Pelops”; while ‘Agamemnon’ connotes “insights” or “memory” of a “drawer of water” (Akki) – *ie*, “moon-diviner [*mashu* = Akki] insight”; and ‘Menelaus’ projects “moon servant” – *ie*, “lunar priest”

usurper, in this myth, to a related younger ‘half-measure’ characterized as bred to a more effective rule of Thessaly. Which points to the introduction of the variable-month calendar of the Dan measure, in their shared mother – the goddess – and different fathers (*cf.* Hades / Pluto). Æson, the younger half-brother, represents the 29-day month of the new Set / Dan measure, which has replaced the older 30-day Bel month of Pelias,³⁵⁸ as rightful heir to the throne commanding ‘time’. An ingenious mnemonic equating the shorter month with the newer measure – adaptable to the notable succession of younger sons in Hebrew scripture: Isaac superseding Ishmæl; and Jacob displacing Esau.

Jason – whose original name was Diomedes³⁵⁹ – appears before Pelias with a single sandal and “two broad-bladed spears”.³⁶⁰ Raised on Mt Pelion by Cheiron the Centaur, he commissions Argus “to build him a fifty-oared ship” which he sails to Colchis with fifty Argonauts.³⁶¹ The golden fleece of the sacred ram,³⁶² summoning the spectre of Mendes

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- 358 the Bel month notably still in the picture, however, because the new Dan calendar employed both 29-day and 30-day months
- 359 ‘Diomedes’ resounding ‘Demeter’ and ‘Tiamat’ – suggesting the ‘divided rule’ of variable months (*cf.* Jason and Jacob)
- 360 sandals symbolic of a journey through the Egyptian underworld of the Tuat – the single sandal effecting an uneven stride (as in the variable Dan measure which enters the underworld either on the 29th or 30th day); while the two “broad-bladed spears” refer to the variable ‘widths’ of the waning crescent in the radical Dan calendar [GRAVES, *The Greek Myths*, p578c]
 NOTE Jason loses the other sandal carrying Hera (the goddess) across the River Anaurus (Tuat) – tying the ‘variable interval’ to the transit of the moon through the goddess’s domain of the underworld during the dark nights after waning crescent
- 361 Centaur (“hundred”) + Cheiron (“hand”) = “hundred-handed”; Argus the Thespian recalls hundred-eyed Argus Panoptes whom Hera posted to spy on Io (daughter of Inachus king of Argos); while the fifty Argonauts joined in arms to man the fifty oars of the Argo, raised a hundred hands – all summoning the measure of the initial 100-month Dan calendar [GRAVES, *op cit*, p579h]
- 362 “The fleece now hung from a tree [*cf.* Burning Bush: branches as courses, leaves as phases – p52, fn153] in the grove of Colchian Ares [Horus], guarded night and day by an unsleeping dragon [Apophis as Dracon].” [GRAVES, *op cit*, p578g]

the ram – the antecedent ‘great year’ measure (3950 years later reduced to 350 – cf, p260) required to rationalize the separate calendars of the Egyptian solar (70-year Horus) and lunar (25-year Apis) rounds.³⁶³ On his return, Jason is said by Polybius to have “first sacrificed to the 12 gods”³⁶⁴ – the introduction of the Olympian pantheon notably tied to the desecration of the Mendes cycle (which may appear to have been obviated, with the adoption of a single luni-solar calendar). [see p260]

The Bel-measure element common to Pelagon, Pelasgus, Peleus, Pelias and Pelops is further cemented in the fate of Pelias – cut into pieces and boiled by his daughters after being deceived by Medea into believing he would shortly be rejuvenated³⁶⁵ – Pelops and Pelias straining the dregs of a common broth. It should be clear, however, that Greece had fostered the Bel measure before Cadmus is reputed to have introduced the disruptive new Hyksos or Phœnician,

- 363 Jason, on claiming his right to the throne usurped by Pelias, relinquished “the flocks and herds [*ie*, extended measures] which had gone with it” [GRAVES, *The Greek Myths*, p578f]
 “Medea, we are told, led the way for the Argonauts to the sacred precinct of Ares, which was *seventy stades* distant from the city which was called Sybaris and contained the palace of the rulers of the Colchi.” *emphasis added* [DIODORUS IV. 48:1, VOL II, p493]

- 364 DIODORUS IV. 49:3, VOL II, pp496/7, fn1

- 365 “[Pelias] then watched while [Medea] cut a bleary-eyed old ram [the Bel measure tethered to the misted prospect of the ‘endless’ Mendes cycle] into thirteen pieces [the phases between Set and Osiris in the new 29-day month] and boiled them in a cauldron. Using Colchian spells [of the old ineffectual measure], which he mistook for Hyperborean ones, and solemnly conjuring Artemis to assist her, Medea then pretended to rejuvenate the dead ram – for a frisky lamb was hidden, with other magical gear, inside the goddess’s hollow image [recalling the hollow Apis model in which Mycerinus was purported to have interred his daughter, representing the 25-year ‘great year’].” [GRAVES, *op cit*, p613e]
 NOTE that the competing measure is identified as Hyperborean – the Set measure of the Hyksos extruded at Stonehenge before being broadcast to the ancestral enclaves of the Mediterranean, Ægean and Black Sea brotherhoods (Colchis being the depot from which the extended measures of Narâm-Sin originally entered mainland Europe)

and Danaüs the consonant Egyptian, innovations – both notably memorialized in the myths, as having been derived from the very Bel measure then also resident in Greece (conducted independently by the priests of Narâm-Sin from Crete, by sea, and ultimately Colchis, by land).

ADOPTION OF THE OCTÆTERIS – dated by Duncan Steel, between 800 and 700 BC (p13, fn34) – occurred prior to the three cataclysms which Velikovsky contends devastated the Mediterranean, 747–687 BC (p96, fn259),³⁶⁶ to judge from the apparent incomprehensibility of the Danaüs myth as a mnemonic of the 99-month calendar, among the Classical heirs of Thales (640–550 BC) and successive generations of tyrannical revolt (685–490 BC).

When Danaüs and his fifty daughters relocated to Argos, according to the myth, Gelanor was king – yet Argolis was the ancestral home of the son of Belus.³⁶⁷ While Argus the

366 “The Ægean region is susceptible to the occurrence of tsunamis because of its tectonic setting...Many large and destructive earthquakes, volcanic eruptions and associated tsunamis have occurred from antiquity to the present in the eastern Mediterranean Sea ...A total of 159 tsunami events occurring between 1628 BC and AD 1996 are included [in the Tsunami Catalogue].” [sic] BITTLESTONE, *Odysseus Unbound*, pp489/90 – citing Dale Dominey-Howes: ‘Documentary and Geological Records on Tsunamis in the Ægean Sea Region of Greece and their Potential Value to Risk Assessment and Disaster Management’ in *Natural Hazards* xxv, pp195–224

367 OCEANUS + TETHYS → INACHUS
 INACHUS + MELIA → PHORONEUS / ÆGIALEUS / [IO]
 PHORONEUS + TELEDICE → APIS / NIOBE
 NIOBE + ZEUS → ARGUS / [PELASGUS]
 ARGUS + EVADNE → ECBASUS / PIRAS / EPIDAUROS / CRIASUS
 ECBASUS → AGENOR
 AGENOR → ARGUS (*hundred-eyed*)
 ARGUS + ISMENE → IASUS / IO
 IO + ZEUS → EPAPHUS
 EPAPHUS + MEMPHIS → LIBYA
 LIBYA + POSEIDON → AGENOR (Tyre) / BELUS (Chemmis)
 BELUS + ANCHINOË → ÆGYPTUS (Egypt) / DANAÛS (Argos)
 [APOLLODORUS II. i:1–4, VOL 1, pp129–37]
 NOTE that there appear to be twelve generations from his Titan progenitors to Danaüs

hundred-eyed, and the hundred-handed Argo, appear to associate the 8-year 100-month calendar with Argos prior to the arrival of Danaüs (p127, fn361). Gelanor, curiously, relinquished the throne after a *wolf* killed the “leading bull [from] a herd of cattle [lunar phases] grazing near the city walls”³⁶⁸ – the 25-year Apis ‘great year’ of the 360-day Bel measure, eviscerated (or rendered infertile) by the stealth of a leaner 8-year calendar (*cf. cynic* – p90, fn245).³⁶⁹

The Danaïds – or 50 daughters of Danaüs – who married the 50 sons of his twin Ægyptus under duress, dispatched all but one of the grooms (at midnight) as their father had instructed, with a hairpin through the heart (Lynceus spared by Hypermnestra for respecting her virginity).³⁷⁰ The 8-year 99-month calendar comprises 49 male months of 29 days and 50 female months of 30 days (*cf.* p254) – the dead grooms relegated to the underworld where the ‘great year’ measures customarily resided (*cf.* p120), while their wives were condemned by the judges of the underworld to fill jars full of holes with water, for eternity (symbolizing the cyclical or repetitive implication of the myth).³⁷¹ Lynceus, meanwhile – who avenged the death of his brothers by seizing the throne from Danaüs – sustained the *conversion* of the resident Pelasgians to Danaans (*cf.* p122, fn341).

368 GRAVES, *The Greek Myths*, p201

regarding animals as lunar phases or phase counts, recollect: the sacred treasury of theophanic birds and bulls (p92, fn247); the flight of the gods to Egypt at the birth of Typhon (Set) where they changed themselves into animals (p119, fn336); and the theophanies of the focal phases or gods: Horus the hawk; Thoth the ibis (or baboon); Amon the ram; Ra, hawk-headed (or ram-headed) with serpent-crest; Set the Typhonean animal (or triadic sphinx); Ptah the bull; Osiris the plumed serpent

369 “Danaus, convinced that the wolf had been Apollo [Apis + Bel] in disguise, dedicated the famous shrine to Wolfish Apollo at Argos” [GRAVES, *op cit*, p201] *lucos* (“wolf”) → *leucos* (“[moon] white”)

370 hair (like branches) representing lunar courses, the hairpin signifies a *figured* or *computed* ‘deflation’ of their prevailing measure (*cf.* ‘the moon a balloon’...) [GRAVES, *op cit*, p202]

371 “It seems that the sieve, or leaking pot, remained a distinguishing mark of the wise woman many centuries after the abolition of the Danaid colleges” [GRAVES, *op cit*, p205] *cf. sharu* = “repetition”

The underworld association of the term ‘Dan’, as I have mentioned (p125, fn351), derives from the emphasis placed on the last visible phase in a lunation (Osiris, Lord of the Underworld, set to descend into his realm), which in the new Set measure, embodied the radical characteristic of a *variable* phase – *ie*, alternating its appearance from the 29th to the 30th day of successive months in the calendar cycle. Set³⁷² – the first waning phase in the cycle, visible on the 17th day of the standardized lunation – presided over the new measure (becoming the focal god of the Hyksos), as mighty Lord of Death [*thanatos* = ‘tan’ as in Tanis = Dan], because the 8-year 99-month Dan calendar turned on the pivot of the variable phase, resident in his, the waning, domain.³⁷³ Serving to clarify that the earliest Satanic cults were not considered dark and nefarious in behaviour, but for their mutable measure inclined to the netherworld.³⁷⁴

372 *sttyw*, an Egyptian term used to describe Asiatics as well as the Hyksos, appears to have developed during the Middle Kingdom, into *stt* signifying ‘Asia’ [VAN SETERS, *The Hyksos*, p107]

373 Set + Dan = Satan (the Set measure characterized as an evil disruption of their Bel measure, by the Egyptian priests)
NOTE in this regard, another signal Set / Dan conjunction in the progression of appellations identifying the vital artery of Danaan circulation through Europe: *Is[e]ter* → *Danubius* → Danube

374 *neter* “god” – ‘netherworld’ signifying the home of the gods; the underworld proclivity of Poseidon (Po + set + dan) – water god (like Enki), *submerged* in his realm – likewise associating him with the Dan measure, not because it was a Phœnician import, but because Byblos just north of Sidon (Poseidon’s city) had been the centre of the bronze trade in the Mediterranean throughout the second millennium BC (p121, fn340), a sea trade – *ultimately* involving Phœnicians – conducted with Britain from Byblos, Cyprus and Crete not only to procure the rare white metal of Albion essential to the production of bronze (*ie*, tin), but in pursuit of increasingly greater insights into lunar cycle; a trade arguably initiated by the ancient mariners of Narâm-Sin, whose Hyperborean heirs, as I contend, introduced the radical Set measure to Egypt and the Levant alike, from its birthplace at Stonehenge. NOTE that 12th-Dynasty scarab designs derive from “the Middle Minoan culture of the Ægean [*ie*, Cretan]; use by the Egyptians may be explained by their contact with Minoan culture through the intermediary Syrian ports such as Byblos.” [VAN SETERS, *op cit*, p63]

Those who maintain that the Danaans were a tribe, fail to account for the impression among ancient authors such as Euripides and Strabo (p122, fn341), that subjected peoples like the Pelasgians of the Peloponnese could be *converted* to their line – an incongruity dissolved with the ascription of the *Danaan* nexus to one of observance (*ie*, faith, creed or, as I contend, calendrical measure). Their emergence in scripture, moreover, coincides with the calendrical ‘heresy’ of Akhnaton.³⁷⁵

The Medinet Habu inscriptions of Rameses III identify a confederacy of five groups comprising the Peoples of the Sea – the Tjeker, the Shekelesh, the Teresh, the Weshesh and the Sardan³⁷⁶ – in association with an isolated group

375 “The Philistines are first mentioned by name (*prst*) in the annals of Rameses III for his fifth (1185 BC) and subsequent years, inscribed in his temple to Ammon at Medinet Habu near Thebes. This describes his campaign against an invasion of Libyans and various other peoples generally known as the ‘Sea Peoples’, of whom the *prst* were one. Other members of the ‘Sea Peoples’ had already been mentioned in the inscriptions of Merenptah, Rameses II and in the 14th-century Amarna Letters (*Lukku*, *Serdanu*, *Danuna*). The carved reliefs in the temple at Medinet Habu show the Sea Peoples arriving with their families and chattels by wagon and ship, and the *prst* and another group closely associated with them, the *tkr* (*Tjekker*), are depicted wearing head-dresses of feathers [a ‘mohawk’] rising vertically from a horizontal band. A head wearing a similar head-dress is one of the pictographic signs on a clay disk found at Phaistos in Crete [one of 45 characters, which recurs 19 times], and usually dated to the 17th century BC.” [New Bible Dictionary, p932]
NOTE that Immanuel Velikovsky identifies this head-dress with the feathered helmet of the Persian (*prst*) militia spearheading the invasion of Egypt under Cambyses (525 BC), summoning the attendant chronological revisions to accommodate the idea (which form the basis of his radical theory that some 400 years have been duplicated in histories of the first millennium BC)

376 VELIKOVSKY, *Peoples of the Sea*, p53

NOTE Robert Graves identifies the clans of the Sea Peoples as “the Sherdina and Zakkala of Lydia, the Shakalsha of Phrygia, the Pulesati of Lycia, the Akaiwasha of Pamphylia” and the Tursha, whom he claims were the ancestors of the Sardinians (Sherdina), Sicilians (Zakkala), Philistines (Pulesati), Achæans & Tyrrhenians (Tursha) [GRAVES, *The White Goddess*, pp54/5]

of Peoples of the Islands, referred to as the Denien³⁷⁷ or the Danuna.³⁷⁸ A confederacy which does not strain credulity as a *retrenchment* of the radical Hyksos element disrupted by Ahmose, and ultimately routed by Seti I and Rameses II a generation or so before, only to return in an attempt to dislodge the regressive Bel measure once the influence of the Dan revision had saturated the Ægean.³⁷⁹

Sky god Anu, as polar complement of Danu, the putative goddess of the Danuna,³⁸⁰ highlights the underworld as

377 VELIKOVSKY, *Peoples of the Sea*, p53 – who alone notes their segregation in the Medinet Habu texts, as Peoples of the Islands

378 GRAVES, *The White Goddess*, p54

379 “To support the identification of Denien with Mycenaean Greeks, it was argued that Denien (Dnn) stands for Danaäns (a Homeric term for archaic Greeks). Some texts, however, connect them with the Syrian coast, and others with Cyprus. I, however, lean toward identifying the ‘Peoples of the Isles’, the Denien, with the Athenians, since *d* and *t* in Egyptian are one and the same letter. ...The Peoples of the Sea is a general name for a conglomeration of tribes or a confederation of nations; Ramses III supplies the names of various peoples covered by this generic name: Tjkr, Skls, Trs, Wss, and Srdn. Various efforts have been made to identify these tribes. The Tjekker may have been Teucrians, or Greeks who settled in the fifth century in Dor, a city of Tjekker. The Shekelesh are possibly from Sargalassos in Asia Minor. The Teresh may be from Tarsus or Tyre. The Weshesh are perhaps from Assos or Iasos or Issos in Asia Minor. The Sardan are familiar mercenaries of the pharaohs of the 19th Dynasty, Seti and Ramses II. The phonetics of the name made one group of scholars look for Sardinia and another group for Sardis, the capital of Lydia in western Asia Minor. The Lydian kingdom, however, dates from the eighth and later centuries.” [VELIKOVSKY, *op cit*, pp53/4] NOTE that the equation of *Denien* with *Athenian* returns us to the *Aten* of Akhnaton’s calendar reform (and the conciliatory 45-day interval advanced to accommodate both the domestic 30-day Bel measure of Egypt and the intrusive 29-day Set / Dan measure of the Hyksos); while the identification of the *Teresh* with Tarsus in Cilicia – where Typhon or Set was purportedly conceived (p119, fn336) – or Tyre in Phoenicia (home of Agenor, Cadmus, Europa, Tyro and Thales) lends to the thesis of Set-measure diffusion from the Levant through the Ægean

380 “The Goddess Danu was eventually masculinized into Dôn, or Donnus, and regarded as the eponymous ancestor of the confederacy [of the Tuatha dé Danaan].” [GRAVES, *op cit*, p36]

her station – the ‘Dan’ root yet again relegated to the realm of death (*thanatos*), as I contend, because the calendrical measure embodied in the term derived its notoriety from the terminal (*tan*) phase in a standard lunation on which the variable count turns. Fortifying my contention that the various enclaves of lunar priests maintaining the Dan measure throughout the Ægean, relied upon a network of associated governors (or tyrants) who seized control of the capitals³⁸¹ and ports to install an improved administration.

But the Dan measure had been introduced, according to Egyptian intimations, long before the Hyksos remnant was arguably routed from the Delta. Suggesting that its export into the Ægean represents an emergence from an extended period of struggle with resident authorities. The agents of change responsible for displacing the old Bel rule among the Ægean elite, individually may have lacked insight into the mnemonics preserving the measures of their reform, but the chaos of a succession of devastating cataclysms presented an unparalleled opportunity which required a disciplined advance guard to ‘restore’ order and pave the way for the expedient implementation of the ‘heretical’ new measure. Hence the introduction of the priestly Seven Sages into Greece – notably at the courts of tyrants – *following* the rise of tyranny. When Hippias of Athens, the last tyrant, died (490 BC), lunar colleges like the celebrated *Semicircle* of Pythagoras had only recently been instituted, the priests

381 the *Serdanu* of Sardis in Lydia – site of the earliest tyranny on record: Gyges of the Mermnadæ (685–652 BC) terminating the rule of the Heracleidæ under Myrsilus – unmistakably associated with Sardinia: apart from Sicily the most conspicuous island in the sea lanes to Britain, where the Set / Dan measure *initially* developed, as I contend; the appellation *Ser-Danu* implying “head-Dan” enclave, while resounding signal overtones of *sharu* (“repetition”, as in the 56-year nodal regression cycle of *Sargon*), the Saros cycle, Sarpedon and the Saronic Gulf (Gulf of Ægina); just as the related *Lukku* (of the Amarna letters) – summoning echoes of *leucos* (“white”, as in ‘moon’) and Liguria, the mainland adjacent to Sardinia and Corsica – may be identified with the Dan presence in Lycia, the ‘province’ in Ionia separated from Lydia by Caria (recalling Car, the moon god), home of Anax and Asterius the giants, who were displaced by Cretan Miletus

ensconced at long last in their retreats amid the *polis* and its ferment of constitutional discourse, like a mite secreted in the ear of an unwitting host.³⁸²

The Dan network of Greek Danaüs and his 50 Danaïds, the Danuna or Denien of the Islands, the Serdan of Sardis and Sardinia, and the Apidanians of Apia, extended from Tanis in the Delta up the Jordan River to the cities of Dan, Damascus and Sidon; through the territory of the Mitanni to Adana on the Sarus River;³⁸³ across Cappadocia and the Taurus Mountains to the city of Dana (Tyana) and beyond Anatolia to Edonia on the border between Macedonia and Thrace (where Cadmus debarked in mainland Greece); up the Danube, Dniester, Dnieper, Don and Donets rivers draining eastern Europe and the western steppe; to Danzig and Denmark³⁸⁴ on the Baltic Sea.³⁸⁵

382 *ie*, posterity

383 the Sarus River between the Cyd[a]nus (with Tarsus on its bank) and the Pyramus to the east (in Cilicia across from Cyprus, where Typhon or Set was purportedly sired) – predicated on the seminal influence of ‘great year’ measure (*sharu* = “repetition” = Saros)

384 home of Dana, mother goddess of the Danes – equated with Greek Danaë, Sumerian Dam-kina, Babylonian Danu, Russian Dennitsa, Irish Domnu and Hebrew Dinah “the universal Triple Goddess...” [WALKER, *The Woman’s Encyclopedia of Myths and Secrets*, pp206/7]

NOTE that the Dan measure projects this goddess association merely because its signature ‘variable phase’ (waning crescent) ushers into her realm; the triple goddess, as I see it, embodies a triad of phases – opposed crescents bracketing full moon – accentuating the goddess *aspect* underlying the visible *spectres* (the goddesses of the Dan measure, conversely, representing the *personification* of ‘lunar cycle’: Athena = Aten; mindful that *Denien* has been identified with *Athenian* by Velikovsky)

385 Plato has Socrates reason that names – “given with a view to instruction” [PLATO, *Cratylus*, p151] – “belong to things by nature” [*op cit*, p31] as Cratylus contends (that if a horse gave birth to a calf it would not be called a foal) and that the poets had authored our universe of speech with these fundamentals in mind: in otherwords, the names they have given to the gods, heroes and places in their works conceal insights into the quint-essential nature of those subjects – derivations apprehensible by tracing terms back through the catalogue of artful mnemonics (poetic figures and *measures*) common to all ancient texts

And this European littoral from Danzig to the Netherlands (and beyond the lowlands, from Artois through Brittany) delimits the mainland territory beyond the Mediterranean and the Atlantic in which the megaliths of an earlier era are expressly concentrated.³⁸⁶ An area long associated with the lucrative amber trade of the aristocratic Cimbri³⁸⁷ of Denmark, Heligoland and the Frisian archipelago – which followed the Elbe, Oder and Vistula valleys south to meet the main Danube and Dniester arteries to the Balkans.³⁸⁸

386 SERVICE & BRADBURY, *The Standing Stones of Europe*, p11, fig 1

387 cf. SPANUTH, *Atlantis of the North*

NOTE that the names of the ancient Cimbri of Denmark and the Cymry of Wales – where the Stonehenge bluestones were quarried – prove cognate with Wadi Qumran, the site of the monastery of the Pythagorean Essenes responsible for the production of the so-called Dead Sea scrolls. The evident lunar origin of the term *Qumran*, however, confounds the authorities:

“The Arabic in its present form is meaningless. The commonest word in that language with the same root letters *q-m-r* means *moon*, but that does not seem to have any particular relevance to the place. Some have wondered whether in fact the name is Arabic at all in derivation and have tried to connect it with the Essenes and their monastery.” [ALLEGRO, *Search in the Desert*, p92] It is further notable in the context of a Dan-diffusion that the Essenes prized the *Book of Daniel*: “The Book of Daniel was favorite reading among the People of the Scrolls, to judge from the number of fragmentary copies which have come from the caves.” [ALLEGRO, *The People of the Dead Sea Scrolls*, p48] While the black obelisk of Salmanassar III (859–824 BC) bears a depiction of “Kinsmen of Jehu, son of a man named Khumri... shown bringing tribute consisting of bars of metal and vessels of silver and gold. Oddly, *Khumri* was the Assyrian designation of the Jews, but they are not mentioned in the chronicle engraved on the obelisk.” [CERAM, *The March of Archaeology*, p216]

388 “These Northerners from the land of amber had, so the traditions told, founded the principal Greek shrines at Delphi and on Delos. Herodotus (4.33, 4.34) told of the solemn embassies and sacrificial gifts of the Hyperboreans who came to Delos. The gods Apollo and Artemis were said to have come to Greece from the country of the Hyperboreans, and a few Hellenes had themselves visited that country, and in their turn dedicated costly gifts at its shrines. Similarly in ancient times a Hyperborean named Abaris had come to Greece, and renewed the old friendship and alliance with the Delians.” [SPANUTH, *op cit*, p257]

The fact that the eponymous Dan mainstreams all drain to the south, supports the projection of a putative Dan diffusion from north to south – borne on their currents – corresponding with an apparent migration of northerners variously identified by conventional historians with the Urnfield folk, Heracleidæ or Dorians (who comprised the confederacy of Pulesati, Sardan, Shekelesh, Teresh, Tjekker, Weshesh and Zakkala, according to the Medinet Habu inscriptions). An alternative hypothesis of sustained intercourse between the northerners and their Mediterranean hosts, however, harbours the prospect that the disruption caused by the outsiders³⁸⁹ in Egypt, was purely calendrical; and that they had not only regularly delivered treasured cargoes of tin and amber³⁹⁰ to their southern relations³⁹¹ but also innovations (like the alphabet) from the spherical temple of Apollo in remote Hyperborea.³⁹²

389 *cf.* Hyksos – *exo* signifying “outside” in Greek – the name with which their earlier intrusion into Egypt was ultimately equated

390 “But the persons who have by far the most to say on this subject are the Delians. They declare that certain offerings, packed in wheaten straw, were brought from the country of the Hyperboreans into Scythia [mouths of the Danube and Dniester], and that the Scythians received them and passed them on to their neighbours upon the west, who continued to pass them on until at last they reached the Adriatic. From hence they were sent southward, and when they came to Greece, were received first of all by the Dodonæans [a sacred Dan outpost – *cf.* p140, fn399A]....Such, according to their own account, was the road by which the offerings reached the Delians.” [RAWLINSON, *The History of Herodotus* IV: 33, VOL I, pp299/300]

391 related through the common measure of Narâm-Sin

392 “Leto was born on this island, and for that reason [her son] Apollo is honoured among them above all other gods; and the inhabitants are looked upon as priests of Apollo, after a manner, since daily they praise this god continuously in song and honour him exceedingly. And there is also on the island both a magnificent sacred precinct of Apollo and a notable temple which is adorned with many votive offerings and is spherical in shape [*ie.* Stonehenge].” [DIDORUS II. 47: 2, VOL II, p39] NOTE in this respect, that the Denien were singled out in the Medinet Habu inscriptions as People of the Islands (*cf.* Delian) – Britain and Ireland notorious as the Cassiterides or Tin Isles, arguably back to the days of Narâm-Sin

The Heracleidæ (children of Heracles) were descendants of Inachus of Argos through his daughter Io and her great-grandson Belus (father of Danaüs).³⁹³ While the narrative of their occupation of the Peloponnese – notably entitled ‘Return of the Heracleidæ’ – was held by the Dorians to be an account of *their* ‘invasion’³⁹⁴ (repelled however at Athens through a duel between Melanthus and Xanthus).³⁹⁵ Thus the equation of the Dorians with *returning* Danaans (the Egyptian 99-month Dan contingent led by Belus’s Danaïd granddaughters, succeeding the 100-month incursion of Cadmus who introduced the 8-year measure to Athens and Thebes – both namesakes of Egyptian Thebes).³⁹⁶

393 APOLLODORUS II. i–viii, VOL I, pp128–293

394 HARVEY, *The Oxford Companion to Classical Literature*, p201

395 SPANUTH, *Atlantis of the North*, p187

396 “...[Solon] you are ignorant of a most illustrious and excellent race of men, who once inhabited your country; from whence you and your whole city descended, though a small seed only of this admirable people once remained. But your ignorance of this affair is owing to the posterity of this people, who were *for many ages deprived of the use of letters, and became as it were dumb*....Hence it happens that you become juvenile again, and ignorant of the events which happened in ancient times, as well among us as in the regions which you inhabit....But for your sake, and that of your city [Athens], I will relate the whole; and especially on account of that Goddess [Egyptian Neith; Greek Athena] who is allotted the guardianship both of your city and ours [Saïs], and by whom they have been educated and founded; *yours, indeed, by a priority to ours of 1000 years*, receiving the seed of your race from Vulcan [Ptah] and the Earth.” (emphasis added) [PLATO, *Timæus*, pp101/2]

NOTE that Athena (Aten) was equated with Typhon through her adoption of the skin of Pallas the goat-giant (*cf.* Mendes), father of the 50 Pallantids (*cf.* Typhon’s hands each trailing 50 heads) – Manetho translating her name “I came from myself” (*cf.* Aten, or lunation, which gives birth to itself). “The origin of Athene as a comet is implied in her epithet Pallas, which, as is commonly known, is synonymous with Typhon; Typhon, as Pliny said, was a comet.” [VELIKOVSKY, *Worlds in Collision*, p171] It bears repeating that *coma* signifies “hair” in Greek, the red hair of Set (Typhon) associating the underworld god of the Hyksos of Saïs with: Rhadamanthus the fair-haired judge of the underworld; the northern Heracleidæ led by Xanthus (“fair-hair”), equated by some with the intrusion of the sea

The Set measure of the variable month – originating at the temple of Apollo in Hyperborea – had been exported (together with tin and amber) back to the Mediterranean where the 100-month Dan calendar was refined from the 45-day interval of Akhnaton,³⁹⁷ before being expelled from Egypt by Seti I and Rameses II. Introduced into Greece (together with the alphabet) by the Cadmean retrenchment from Tyre, the 100-month *octaeteris* displaced the old Bel measure of the resident Pelasgians before giving way to the 99-month improvement of the Danaïds. While after three cataclysmic disruptions, survivors from the focal Dan college at Tyre attempted to restore civic order throughout the Ægean, with diminishing concern for the calendrical foundation of the myths.³⁹⁸ The myths, moreover, clearly

people; and Arganthonius (“silver locks”) who “reigned over the Tartessians for 80 years, and lived to be 120 years old” [RAWLINSON, *The History of Herodotus* I: 163, VOL I, p83] – intervals curiously reminiscent of the ages of instauration and death of Moses (*cf.* p27, fn79) whom, I contend, represents the 19-year 235-month Metonic cycle (*cf.* p22), which was in part projected from the variable Set/Dan measure

- 397 the 100-month *octaeteris* incorporating – along with eighty-eight 29-day months – twelve 30-day months equal to eight 45-day intervals (360 days) recollecting the old measure of the Egyptian year in four alternating 45-day male and 45-day female intervals ($8 \times 45 = 360$; *cf.* p88); and the month-and-a-half Hebrew ‘half-tribe’ interval producing an even number of old 30-day months over an eight year period (*cf.* p17, fn45)

- 398 MYTHOLOGICAL FAMILIES [APOLLODORUS I, pp xlv–liv]:

THEOGONY family of the gods Uranus and Ge, beginning with the monstrous 100-handed *Hekatocheiras* (*cf.* p119, fn337) and ending with Typhon the giant of the 100 trailing heads (p121)

DEUCALION the Greek Noah (son of Prometheus) whose line ends with the 100-handed Argonauts (*cf.* p127, fn361)

INACHUS grandfather of Apis and forebear of 100-eyed Argus; Belus and Agenor; Danaüs and Ægyptus (whose offspring total 100 children, one of which – Lynceus – is spared from eternity in the underworld); and Heracles father of the 67 Heracleidæ, 50 of whom were born to the 49 Thespiads (*cf.* p129, fn367)

PELASGUS grandfather to Lycaon’s 50 sons (*cf.* p124, fn345)

ATLAS son of Iapetus and father of the seven Pleiades (*cf.* p112)

ASOPUS father of Pelagon, who sold Cadmus the cow (*cf.* p123)

PELOPS of the ivory shoulder, son of Tantalus (*cf.* p126)

protract the antecedence of the Bel measure throughout Greece (whether – as Plato has the Saïtic priest contend – its “seed” was sown 1000 years before propagation in Egypt, or not).³⁹⁹

399 though it is not unreasonable, given the contention that Sargon appears to have been the first to extrude the 18.6-year nodal regression cycle (and protracted 56-year round) from sustained lunar observation – arguably at Stonehenge – to assume that the ancient mariners employed by the Akkadians were likely Cyprians and Cretans whose conveyance introduced the Bel measures to Greece prior to the expansions of his grandson Narām-Sin (which bore them to Egypt)

A NOTE that CEnotrus and the first Peloponnesians to cross the Ionian Gulf, were Arcadians (*cf.* Akkadian) from whom Italus (Italians) and Sicelus (Sicels) descended, the CEnotrians later known as the Aborigines (*Aberrigines* signifying “wanderers”) dominating Italy from the heel to the hills of Rome. Pelasgians comprised a subsequent migration – following six generations at Argos and six more in Thessaly, where they were displaced by the Leleges, descendants of Deucalion (also signifying “homeless” or “gathered out of the earth” – cognate with *Ligurian*) – their dispersal to Crete and the Cyclades; Bœotia, Phocis and Eubœa; the Hellespont and Lesbos; directed predominately to Dodona (where they had kinsmen “against whom, as a sacred people, none would make war”) before finally removing to the Spinetic mouth of the Po (an amber artery) across the Adriatic, where they settled. Soon allied with the Aborigines, they captured Croton (later seat of Pythagoras, “a rich and large city”) making it their base to drive the Sicels into Sicily. Ultimately the Pelasgians were decimated by “divine wrath, and...calamities inflicted by the hand of Heaven [cataclysms]” – drought, stillbirth in cattle and women, deformity, and the destruction of all of their cities but Croton. [DIONYSIUS OF HALICARNASSUS I. ix–xxvi, VOL I, pp28–85]

B NOTE that the reference to this ‘seed’ deriving from Vulcan or Hephæstus (equated with Egyptian Ptah who symbolizes waning half-moon) draws attention to the Hebrew alphabet of 22 letters – the 22nd day and 23rd night of a lunation hosting his spectre – which was configured with 7 ‘doubles’ (recalling the 7 focal phases of the Egyptian pantheon: *cf.* p92, fn248F) to complete the count and return the cycle to the waning ‘double’ (*vet*) of waxing crescent (*beth*) in a calendar month conceived to begin and end with dark nights (*cf.* p33, fn97): *cf.* ‘*alpha* and *omega*’ where *alpha* represents the introductory dark night and *omega* (“large O”) the completed lunation on the corresponding dark terminal night of the cycle

THE TUATHA DE DANAAN⁴⁰⁰ were the fifth (or seventh) of as many as nine incursions⁴⁰¹ supposed to have possessed Ireland after the Deluge, according to surviving accounts – all embarking from the Mediterranean and Black Seas.⁴⁰² Two variants of a preliminary intrusion – led by women – sustain distinct Egyptian overtones.

“Now, who (was the first who) took Ireland after the creation of the world? This is what the Book of Druim Snechta says, that Banba was the name of the first woman who found Ireland before the Flood, and that from her Ireland is called ‘Banba’. With thrice fifty maidens she came, and with three men. Ladra, one of the three men, he is the first dead man of Ireland at that time: from him is named Ard Ladrann. Forty years were they in the island: thereafter a disease came upon them, so that they all died in one week. Afterward Ireland was for two hundred years without a living person and thereafter came the Flood.”

[MACALISTER, *The Book of the Taking of Ireland* VOL II, p177]

Banba and the 150 maidens produce a sum (151) equivalent to that of the three ‘great years’ of the Egyptians (*cf.* p99) – resounded in the three accompanying men in her train.

400 properly describing the Tuat (or underworld) of the Danaans – in my opinion, to signify the underworld Dan measure – the use of the term to designate its proprietors, obscures a signal origin: “*tuath* means primarily *people* in reference to the ruler or king; it came to mean *laity* in contrast with *clergy*; also the *district* or *townland* where the people lived, but it does not denote a district of fixed extent” (emphasis added) [KEATING, *The History of Ireland* VOL IV, p465]

401 (1) [Banbha] (2) [Cessair] (3) [Fomorians] (4) Partholonians (5) Nemedians (6) Fir Bolg [Fir Domhnann and Gaileoin] (7) Tuatha de Danaan (8) Milesians (9) [possibly Dravidians] MACALISTER, *The Book of the Taking of Ireland* VOL II, pp177–95

402 *Fomorians* “seamen of the race of Cham [of Amor; *ie*, Akkad]”; *Partholon* “son of Sera...sprung from Fathachta, son of Magog”; *Neimheadh* “son of Agnoman...sprung from Fathachta, son of Magog [of Scythia]”; *Fir Bolg* “from Thrace”; *Tuatha de Danaan* descendants of the Nemedians (and thereby the Partholonians) “sprung from Iobath son of Beothach...had their origin in Scythia ...came from Greece...Druidism learned by them in Achaia [*cf.* Akkad]”; *Milidh* of the Milesians (*cf.* Miletus) “son of Bilé, son of Breoghan; born in Spain...goes to Scythia with 30 ships ...marries Scots, daughter of Pharaoh Nectonibus” [KEATING, *The History of Ireland* VOL IV, pp310, 415/6, 397, 306, 466/263, 384]

"Cessair daughter of Bith son of Noe, she it is who took Ireland at first, forty days before the Flood. This is the reason for her coming, fleeing from the Flood: for Noe said unto them: Rise, said he, to the western edge of the world: perchance the Flood may not reach it. Thereafter, on Tuesday, dated the fifteenth, she set forth from the island of Meroe upon the river Nile in Egypt. She was ten years in Egypt. Twenty days had she upon the surface of the Caspian Sea. Twelve days had she on the Caspian Sea till she reached the Cimmerian Sea. One day had she in Asia Minor, to the Torrian Sea. A sailing of twenty days had she to the Alpine Mountain: for a space of nine days had she thence to Spain. A sailing of nine days had she from Spain to Ireland. A unitary five [= the fifth day of the month], on Saturday [she landed]... The crew of three ships arrived... Two of the ships were wrecked. Cessair with the crew of her ship escaped, fifty women and three men..." [MACALISTER, *op cit* VOL II, pp181–3]

This tale adds the dimension of two submerged 'ships' (the moons absent on the first two nights of the new lunation) while cryptically resounding the sum of the 'great years' in the occupants of the sunken vessels. And the fifty maidens further summon the presentiment of the fifty Danaïds.

Banba suggests a survival of the names of Lugalbanda – father of Gilgamesh – and Banaded, rising spectre⁴⁰³ of the Mendes triad (*cf.* p90, fn242), substantiating the 'great year' focus of the narratives detectable in the signal sums of '50' and '151', and further sustained in Partholon's descent from Sera (*sharu* = "repetition" → Sargon). The emphasis in the conquest narratives on areas surrounding the Black Sea – Scythia, Thrace, the Caspian and Cimmerian (Azov) Seas and Asia Minor – betrays conspicuous familiarity with the territory drained by the Dan arteries (Danube, Dniester, Dnieper, Don and Donets), which arguably bore the pivot of the new 'great year' measure (the variable month) back to the calendrical cradle of its Bel forebears.

It seems further significant that the time the daughter of Bith spent at sea amounts to 70 days (the sole day in Asia Minor placing her ashore) – recalling the 70-year 'great year' of Bakh. *Bith*, moreover, appears cognate with *Pytho*, the serpent of the underworld dispatched by Apollo – Cessair,

403 "Banbha was the death aspect of the Irish Triple Goddess [with Éire and Fodha]" [GRAVES, *The White Goddess*, p202]

as ‘daughter of Pytho’, assuming the oracular parameters of the Delphic Pythia. Her name also conceals the syllable of ‘repetition’ (*sharu*) while keening that of Caicher the Druid, one of the three chieftains of the Gædil following the death of Agnoman.⁴⁰⁴ Yet Bith as the son of Noah (*ie*, Japheth) makes Cessair a sister of his seven sons – like Isis beneath the pantheon of the seven focal spectres (*cf*, p92, fn248F), presiding over her underworld realm (the *residence* of the ‘great year’ measures; accumulated cryptically in the trains of both Banba and Cessair). And Agnoman hearkens back to Agenor king of Tyre and father of Europa and Cadmus (and the 8-year⁴⁰⁵ 100-month ‘great year’ calendar).⁴⁰⁶

404 the Gædil (Gæls) appear to incorporate the five main divisions of Scythian emigration to Ireland, descending – in the myths – from Noah → Japheth → Gomer (or variously Magog) → Ibath → Baath → Feinius Farsaidh → Nel (Niul [Nile] or Mil[idh] + Scota) → Gædel Glas → Esru → Sru [*sharu*] → Eber Scot → Boaman → Ogaman [ogam] → Tat [Thoth] → Agnoman → Lamfhind → Eber Glunfhind → Agni → Febri Glas → Nenual [MACALISTER, *The Book of the Taking of Ireland* VOL II, pp9–19] NOTE that Caicher the Druid – son of Eber (son of Tat) – was thereby a nephew of Agnoman (and cousin of Nemed); while namesakes with the Tuatha de Danaan and Milesians appear to have been his descendants – the Milesian, son of Manntan [*cf. thanatos*] son of Caicher, credited with the slaying of Banba [KEATING, *The History of Ireland* VOL IV, p194]

405 the *oghdad*, *ochtair* or *ochtar* (*ie*, octad) recurring throughout the tales – *eg*, the eight sons of Mil; the *Nemed-ochtar*, *et al* – signifying, in my estimation, observance of the superior 8-year Dan measure (in concert with the Eight Pivotal Poles of the Egyptian pantheon – *cf*, p92, fn248G):

“*damh ochtair*, which Nennius has taken for a personal name [Damhochtair], means ‘a troop of eight persons’. We cannot determine which of the series of Invasions is intended; for it is suggestive that *this numerical grouping persists throughout them all*.... Remembering that these tales are theological rather than historical, we seem here to be on the track of a primary group of eight deities, comparable with the central *ennead* of Egypt or the *di consentes* of Rome.” (emphasis added) [MACALISTER, *The Book of the Taking of Ireland* VOL II, pp250/1]

406 while the Gaelic myths clearly contrive a syncretic relief of influences from Egypt, Greece, Scythia, Anatolia and Palestine, it bears noting that the tradition of five or more distinct waves

TYRIAN PRINCESS EUROPA – bearing the new measure of Zeus west to Crete, under duress – invites comparison with another conspicuous princess of Tyre: Jezebel, daughter of the priest-king Ethbaal, who was married to Ahab the eighth ruler⁴⁰⁷ of the northern kingdom of Israel (ca 874–852 BC) to cement a treaty between Omri and Ethbaal. Fanatical in her observance of the Phœnician god Baal (Melkart)⁴⁰⁸ and goddess Asherah, she was permitted by the terms of the treaty, to retain her beliefs at their home in Samaria. Thus the conflict between the old and new measures – Bel and Yahweh – took root in the royal bedchamber.

As noted (p48, fn141/2), the Israelites had repeatedly been seduced by the Canaanites to the observance of the Baals and Asherahs, throughout the ‘410-year period’ of the Judges – a trial which would continue to bedevil the new faith down to the time of Daniel.⁴⁰⁹ Yet the penetration of the high priestess and prophets of Baal into the inner sanctum of Israelite rule threatened the realm to its core – increasing persecution from her retainers ultimately forcing Yahwists, including the prophet Elijah⁴¹⁰ to abandon Court.

of related immigrants supports the proposition of an integrated lunar priesthood refining a succession of complex measures – [1] BEL [2] HOR [3] AP [4] SET [5] DAN [6] BRAN (cf, p88) – whose disparities arrayed their proponents in opposing sects which scripture ultimately epitomized as nations or leagues: the distinction being that they were not fundamentally discrete, but refining a common lexicon of calendrical insights (see p343)

- 407 [1] JEROBOAM I (931–909 BC) [2] NADAB (909/908 BC) [3] BAASHA (908–885) [4] ELAH (885/884) [5] ZIMRI (885/884) [6] TIBNI (885–880) [7] OMRI (885–874) [8] AHAB (874–852) – epitomizing the 8-year measure [New Bible Dictionary, p530]
- 408 Melkarth = Mercury = Hermes = Thoth (cf, *mal’ak*, p113, fn314)
- 409 “Jehu himself continued in apostasy by worshipping golden calves at Bethel and Dan...” – remarkable in that he went to extreme lengths to eradicate apostasy: executing Jehoram son of Ahab as well as his mother Jezebel and Ahab’s extended family (70 sons, signifying the Bakh cycle), before slaughtering the followers of Baal and destroying their temple [New Bible Dictionary, p557]
- 410 *’Elīyyāhū* (Hebrew); *Eleiou* (Greek) ≈ ‘Lord of the vowels’; echoing the *subterranean* secretion of the unspeakable ‘name’ of God – *IEUOA* – in the Boibel-Loth calendar figure (p53, fn155), recalling the *unwritten* vowels of early Hebrew script (cf, p176)

Elijah removed to Zarephath twelve miles north of Tyre while Yahweh famished Samaria and Canaan with a three-year drought,⁴¹¹ then at his lord's command, summoned all Israel – including Jezebel's 400 prophets⁴¹² – to join him atop Mt Carmel, where he slaughtered the prophets (just as Jezebel had butchered those of Yahweh).⁴¹³ Observance of Baal, however, persisted – even at Carmel.⁴¹⁴

- 411 echoing the two nights and three days without a visible phase, between lunations – Yahweh predictably unleashing his rains “...in the third year...” [I KINGS XVIII: 1]
- 412 the number is given variously as 400 [I KINGS XVIII: 19] and 450 [I KINGS XVIII: 22]
- 413 Obadiah, master of Ahab's palace, had managed to protect 100 prophets of Yahweh from Jezebel's slaughter by secreting and feeding them “fifty at a time, in a cave” – an unmistakable allusion to the 100-month 8-year calendar constituting the survival and perpetuation of Yahwism [I KINGS XVIII: 4]
- 414 “Baal was still worshipped on Carmel as ‘Zeus Heliopolites Carmel’ in AD 200...” – pointing to the thoroughness of the Diaspora [New Bible Dictionary, p179]
- A recall that Heliopolis – the seat of Atum, ‘the complete one’ – was also the centre of the black *Mnevis* bull, representing the 56-year nodal regression round (p89), as well as the apparent birthplace of the Ben stone of Anu (On), prototype of the Egyptian obelisk (p107, fn289); and that Zeus as Jupiter was consort to Juno (Iunu → Anu), while fathering Athena (Aten ‘the complete one’) and Epaphos (Apis, the 25-year great bull); supporting the view expanded in the appendix (pp222/3) that Mt Carmel harboured an ancient observatory and monastery or college, sanctified by ‘great year wanderers’ of all stripes
- B NOTE that the ministry of Carmel included the prophets Elijah (directed by an ‘angel’: *mal’ak*), Elisha, Jonah, Micah, Obadiah, Daniel and Pythagoras – Elijah's wife “institut[ing] an order of female recluses” [ENCYCLOPEDIA AMERICANA VOL V, p628]
- C the lunar proclivity of the site is arguably attested in the story of the woman of Shunem: “She called her husband and said, ‘Send me one of the servants with a donkey. I must hurry to the man of God and back’. ‘Why go to him today?’ he asked. ‘It is not New Moon or sabbath’. ... She set off and came to the man of God at Mount Carmel...” [II KINGS IV: 22–5]
- D Carmel is further *prominent* among early Middle Eastern Late Palæolithic (Neanderthal Mousterian) and Mesolithic (Natufian wild cereal culture) sites, bearing signs of continuous occupation [HAWKES, *Atlas of Ancient Archaeology*, p197]

Opposition to the Set / Dan / Bran measures of the 'rebel' factions, it must be appreciated, was led by the priests of Egypt – pharaohs Seti I and Rameses II routing the rebels and re-establishing the 30-day month 360-day year of the Egyptian calendar, from Palestine to Babylon.⁴¹⁵ Yet the fall of Thebes to Assurbanipal and the Assyrians (663 BC) and the Persian conquest of Memphis by Cambyses (525 BC)⁴¹⁶ sealed the decline of Egyptian influence throughout the Mediterranean.⁴¹⁷ Still, the dominance of the Bel measure across Palestine – despite enclaves of Set (Hyksos) and Dan (rebel Egyptian priests) resistance⁴¹⁸ – would endure further assaults by the Macedonians (Ptolemaic and Seleucid) and Romans before falling to the Julian reform of 46 BC.

Scriptural accounts of the susceptibility of Yahwists to the rites of Baal, from the time of Moses to the Babylonian captivity, summon a recurrent spectre of the *scale* of the deviant variable-month calendars aside the pervasive Bel measure – the Israelite defiance epitomized by David in the shadow of a gargantuan impediment.

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- 415 *bellum* (Latin) – “war” – may trace its derivation back to this inexorable opposition of the Bel forces; cf, re-bel
- 416 where he contemptuously impaled the Apis bull *himself* – Cambyses expiring near Carmel three years later (522 BC)
- 417 affording the stimulus for greater calendrical refinements such as the Metonic 19-year (432 BC), Callipic 76-year (330 BC), Babylonian 11-year (after 312 BC) and Hipparchic 304-year (150 BC) calendars, as well as broader diffusion of the variable-month measure occasioned by the introduction of Kabeirean colleges like the *Semicircle* of Pythagoras to Samos (513 BC), Delos, Crete, Sparta and Croton (505 BC) [see p136, fn388; p220]
- 418 from the time of the edict of Seleucid king Antiochus Epiphanes prohibiting observance of Jewish practices (and measures) – which provoked the Hasmonæan resistance (168 BC) – through to the Roman absorption of Palestine (63 BC) and the end of independent Hasmonæan rule (37 BC), down to the fall of Masada (73 AD) and the fatal final rising of Simon Bar-Kosibah (132–5 AD) which precipitated the Diaspora (135 AD) and the expropriation of Judah as *Syria Palestina*, certain Jewish sects retreated into the wilderness to preserve not only their rites and customs but, more critically, their calendrical measures – no greater threat to the order of a people than the disruption of its holy days

The ‘410-year interval’ of the Judges – concluding with the death of Samson the Danite – gave way to another ‘20 years’ of apostasy before Samuel the Ephraimite⁴¹⁹ convinced the Israelites, yet again, to reject the Baals and Astartes.⁴²⁰ But the 70 sons of Jeconiah – indifferent to the return by the Philistines of the Ark of the Covenant to Beth-Shemesh – were mercilessly “struck down” by Yahweh.⁴²¹ Prophet and judge, Samuel anointed Saul as the first king of Israel, in response to demands from the people for a commander in the struggle with the Philistines. But after God rejected Saul, Samuel was directed to Bethlehem to anoint a true king, chosen by Yahweh – the *eighth son* of Jesse.⁴²²

The first of “five smooth stones from the river bed”⁴²³ found its mark between the eyes of Goliath – the Philistine giant losing his head to a clearer (calendrically more acute) vision of lunar and solar convergence: directing the rule of the anointed kingdom of Israel. A rule divided seventy years after the investiture of Saul, into the opposing kingdoms of Judah and Israel (where Ahab would come to preside).⁴²⁴

419 son of Elkanah and Hannah, of *Ramah* in the highlands of Ephraim – cf, *rh*m = “multitude” (cognomen of a ‘wanderer’ or ‘great year’ follower); *ram* in Ra, Nārām-Sin, Aram, Abram, Rameses, Pyramus – Hannah making the promise to Yahweh that her son would never cut his hair (*ie*, he would observe a calendrical measure with fidelity to both lunar and solar cycles, never ‘cutting’ or losing a single day – cf, p130, fn370; cf, *kritikos* – “judge” or “cutter” – p112, fn312) [I SAMUEL I: 11]

420 I SAMUEL VII: 4

421 alluding to the 70-year Bakh ‘great year’ of the Bel measure, dispatched with the *return* of the 8-year alternative of the variable-month measure [I SAMUEL VI: 19]

422 “a boy of fresh complexion [*ie*, the *new* 8-year measure], with fine eyes [*ie*, requiring less adjustment than the Bel measures] and pleasant bearing...and the spirit of Yahweh seized on David and stayed with him from that day on.” [I SAMUEL XVI: 12/3]

423 the five intercalary days of the 360-day Bel-measure calendar defeated by the sole intercalary day of the fresh-faced variable-month 364-day Set / Dan year – David’s sling effecting the tell-tale circuit inscribing the nature of the metaphor (the river bed surrendering an *underworld* measure – where intercalary days were conceived to reside: cf, IEUOA) [I SAMUEL XVII: 49]

424 the 70-year Bakh ‘great year’ symbolizing ‘disruption’

This division – foreshadowed at the Rock of Divisions⁴²⁵ in the wilderness of Maon, where David narrowly escaped the pursuit of Saul – arguably represents the separation of the refined 99-month measure from the earlier 100-month 8-year calendar.

Following the death of the prophet Samuel, David met Abigail, the wife of the brute Nabal “whose business was at Carmel, a man of means who owned 3000 sheep and 1000 goats...engaged in shearing his sheep at Carmel”.⁴²⁶ This episode points metaphorically⁴²⁷ to the intractable [na]Bal measure regulating the observatory at Carmel before its conversion to the less refractory ‘great year’ standard. Ten days or so later, Nabal was shamed to death,⁴²⁸ affording David the opportunity to make the captivating Abigail of Carmel his own.⁴²⁹

425 I SAMUEL XXIII: 28

426 I SAMUEL XXV: 2

427 3000 sheep and 1000 goats associating Nabal with the 3950-year Mendes or ram-figured ‘great year’ of the Akkadian-Egyptians (a ‘goat’ apparently equal to 19-twentieths the measure of a ‘sheep’ when tallied in scores: $.95 \times 1000 = 950$; cf. ‘a baker’s dozen’)

“The fact that a ‘last’ in English (*last*, *load*) may have greater or less value according to the thing specified (1 last of meal or herring amounted to 12, of salt to 18 tons, of gunpowder to 24 kegs, of bricks to 500, of tiles to 1000, of hides to 144 pieces, of wool to 12 sacks) is fairly easy to understand, but that the number word used as a measure should have different values – that a ‘hundred’ herring meant actually 120, codfish 124, or salt 126 tons – is surprising. Other ancient traditional measures (such as the quarter of grain, the carat, the bushel, or the scruple) are similarly tied to the substance measured.” [MENNINGER, *A Cultural History of Numbers*, pp30/1; & p237 for ‘tally scores’]

428 “Yahweh has brought Nabal’s wickedness down *on his own head*” (emphasis added) – equating the ‘wickedness’ with his inability to compute or figure things adequately [I SAMUEL XXV: 39] NOTE that the interval of ‘10 or so days’ comprises the number of intercalary days required to justify the 8-year 100-month calendar (see p252)

429 meaning that the new ‘great year’ 8-year measure was embraced by the ‘heiress’ (representing the lunar goddess) of the Carmel observatory; or that the sanctuary of Car (the moon-god) was absorbed into the estate of the Dan measure (Abigail bearing David’s second son, Daniel) [I CHRONICLES III: 1]

Following the death of the people's king Saul at the hands of the Philistines, his sixth son Ishbaal was anointed ruler of Israel by Saul's cousin Abner, while David was acclaimed king of Judah (initiating the division of the Israelite realm). Their forces met at Gibeon – near Ramah – 12 from either side in single combat slain in unison, before the men of David routed their opponents. "David's followers had lost 19 men in addition to Asahel [slain by Abner], but had killed 360 of Benjamin, Abner's men."⁴³⁰ Which refers to the demise of the 360-day Bel year⁴³¹ and the untidy 20-day intercalary residue required by the 70-year Bakh cycle – beyond the neat accumulation of 11 intercalated months – to justify the Egyptian 'great year' solar measure with the solar cycle (*see* p257).⁴³² Twelve on twelve producing 'two retired sums', to memorialize opposing 8-year measures (*ie*, 2 'years') in a concerted defeat of the duplex Bel calendar.

Then, following the death of Ishbaal, David was anointed king of a united Israel. "David was thirty years old when he became king, and he reigned for forty years. He reigned in Hebron over Judah for seven years and six months; then he reigned in Jerusalem over all Israel and Judah for thirty-three years."⁴³³ A passage presenting a conspicuous discrepancy of six months – which I contend invites the application of two distinct measures.

Both reigns involve the 99-month 8-year measure. 'Seven years and six months' combines the five 12-month, with two of the three 13-month, years of the 99-month calendar, to produce an aggregate 86 months, which projects a sum

430 II SAMUEL II: 30/1

NOTE that the suffix in 'Benjamin' – *ia-min* – is the Sumerian number 'seven', composed of *ia* (five) plus *min* (two); while the suffix in 'Abner' – *ner* – is the Akkadian number '600', his name signifying 'observer of an extended cycle', in that he is identified as the son of Ner (*cf.* *Narâm-Sin*) yet his name implies 'father of Ner' (circumscribing a cyclical generation): *eg.* 5 intercalary days per 360-day year = $(600 \div 5)$ 120 years ($\rightarrow \frac{1}{3} \times 360^\circ$)

431 *Ishbaal* personifying 'man of Baal'

432 20 days = two-thirds of a 30-day month (recalling the unique Egyptian hieroglyphic character preserved for the fraction $\frac{2}{3}$)

433 II SAMUEL V: 4/5

of 92 months with the addition of 6 months.⁴³⁴ While the reign of 33 years comprises four 99-month cycles plus one of the 12-month years to compound a sum of 408 months – the two sums combining to make a total of 500 months (which just happens to equal the number of months in the 40-year reign of David when computed as five of the older 100-month 8-year cycles).⁴³⁵

The apparent discrepancy in the duration of these combined reigns is resolved by *refining* the 8-year measure⁴³⁶ – rendering ‘David’ a signal mnemonic, in ‘his’ segment of the scriptures, of a more decisive defeat over the Bel measure by the superior 99-month variant of the 8-year calendar. Which explains why his *second* son is named Daniel – the Dan measure of the 99 Danaïds having been preceded by the 100-month eight-year Set measure. And David’s son Daniel, beloved of Abigail, was nurtured in the amnion of Okeanos enveloping the sanctuary of Carmel – some 35 miles south of Tyre, home of the princess Jezebel and her mythical counterpart, Europa (sister of Cadmus).

Yet the scriptures preserve what appears to be an earlier 99-month mnemonic, in the story of Abram’s conception of Isaac (*cf.* p13), and even earlier 100-month mnemonic, in the cumulative genealogies of the sons of Noah (*cf.* p20, fn53) – both intended, in my view, to trace the descent of the Chosen ‘variable measure’ among ancestors from [A] the Caucasus (Ararat),⁴³⁷ and [B] Sumeria (Ur).⁴³⁸ In fact, the accounts of three diffusions in the Pentateuch – adding the Exodus from Egypt (Avaris) – adopted ‘the progression

434 $5 \times 12 = 60$

$2 \times 13 = 26$

$60 + 26 = 86$

$86 + 6 = 92$

435 $4 \times 99 = 396$

$396 + 12 = 408$

$408 + 92 = 500 = 5 \times 100$

436 the same number of months comprising a more lasting reign

437 which agrees with the Greek accounts of the ‘father’ of Man – Prometheus – and the Golden Fleece; *cf.* Urartu

438 conforming with the Sumerian scriptures concerning Gilgamesh, and Ziusudra (Ziusuddu) or Ut-Napishtim [Assyrian]: *ie.* Noah

of calendrical refinements' as a model of the movements of their lunar forebears: [A] Noah and his sons representing the earliest, or 100-month, Chosen measure – to establish the diffusion from the Caucasus cradle as the initial spread of calendrical insights; [B] Abram symbolizing the next, or 99-month, Chosen measure – to correlate a subsequent departure from Ur; and [C] Moses and the Sons of Israel characterizing the climactic 235-month Chosen measure – to conclude the final departure, from Egypt.⁴³⁹

Yahweh, in this regard, represents the contraction of five intercalary days of the Babylonian and Egyptian measures, into a single day – his unutterable name (comprised only of vowels) derived from the Sumerian word for 'five': *ia*.⁴⁴⁰ In other words, *Yahweh* initially deified a singular *figure* subsuming the antecedent measure 'five'.

Saul and David, as revealed, prove to be mnemonics for the 100- and 99-month eight-year calendars respectively, during the period of conflict ('apostasy') with the resident Bel factions in Palestine – the monarchy symbolizing the ultimate domination of territory by the Bran proponents. Which should illustrate that the epithet 'Chosen People' refers to patriarchal figureheads (or figments) representing *mnemonics* of a chosen *Measure* – the radical variable-month year⁴⁴¹ – and its diffusion through time.

439 Chosen (Set) measures distinguished by the variable-month year (both 8-year measures embracing the single intercalary day) NOTE that the development of the calendar refinements isn't being attributed to, but rather represented by, the respective patriarchs, in an extended analogue of progressive advancements; cf, 'ur'/'ar' consonance blazoning the trail: Ararat, Urartu, Ur and Avaris – which, according to Bernhard Anderson, was rebuilt by Seti I and Rameses II, with the labour of the Chosen People, as Tanis (*tan* = *dan*), the northern capital of the 19th Dynasty (cf, p5, fn3), though John Van Seters contends they were distinct

440 MENNINGER, *A Cultural History of Numbers*, p165

441 in other words the patriarchs *alone* were referred to as 'chosen' because they were purely projections of the new-God measure (*Ia* = a single intercalary day), each representing a *select* aspect or consequence of the revolutionary calendrical refinement: Noah, Abram, Isaac, Jacob, Joseph, Moses, Joshua and David, *contrived* to preserve the parameters of an *alternative* or 'chosen' measure

The Set / Dan measure – *satanized* by the Egyptians and ultimately by the proponents of Judaic monotheism – was initially expelled from the Delta to a temporary refuge in Judah before the Egyptian forces of Seti I and Rameses II pursued its proponents north to Sidon.⁴⁴² The majority of adherents appear to have removed further to Crete and the Aegean littoral to escape their pursuers, preserving the Dan measure of brothers Zeus, Poseidon and Hades – the gods (or representative phases) of the 100-month pantheon displaced by those of the *new* variable-month year. While a remnant of radical priests sustained the chosen measure in Palestine – their scriptures (secreting the figurative details of the improved calendar) quantifying the refinements, in a paradigm of *patriarchs* rather than *gods*, which elevated the feature of the single intercalary day to pre-eminence, or ‘divine’ status. This distinction between the Hellenic and Hebrew Dan (*ie*, Bran) measures succeeded the ‘relocation’ of the tribe of Dan (notably the fifth son of Jacob – with Billah, maid-servant of Rachel).⁴⁴³

*“To the tribe of the sons of Dan came the seventh portion⁴⁴⁴
[of Canaan] according to their clans....But the territory of the
sons of Dan resisted them; and therefore the sons of Dan went
up and attacked Leshem and captured it and put it to the sword.
Having seized the town they settled in it, and changed the name*

442 *set-tan* → *satan* → Sidon

443 Dan concentrating the five intercalary days of the original Bel measure (as *Ia* integrated the measure ‘5’ into a single integer: thus the epithet ‘hand of god’) – the unit-of-five measure ultimately diverging into two variants (100- and 99-month) allegorized in the relocation of Dan to the environs of Tyre (Carmel) and Sidon where the split (or departure) occurred

444 Set – fifth of the seven focal phases (p92, fn248f), whose terminal form, waning crescent, comprises the seventh focal phase (Osiris, Lord of the Underworld) – lends his name to the number ‘seven’ (*septem*) and attendant *sabbath* (the duty of *resting* on the seventh ‘day’ predicated on the observation of the duplex aspect of the waning crescent: computed alternately as the 29th or 30th day of the variable month); *resting*, to signify two successive counts involving the seventh focal phase
NOTE that Benjamin – youngest of the twelve sons of Jacob (embodying a ‘summary’) – in this sense, incorporates ‘five’ (Ben = *pente*) and ‘seven’ (*ia + min*), while standing twelfth

of Leshem to Dan after Dan their ancestor. This was the inheritance of the tribe of the sons of Dan, according to their clans: these towns with their villages." [JOSHUA XIX: 40, 47/8]

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Last to receive their portion of Canaan, the sons of Dan⁴⁴⁵ alone were compelled to move – purportedly because the residents repelled their advance (a likelier eventuation for the incursions of earlier rather than later tribes, one might expect...).

Furthermore, the substitution of Judah for Dan (fn445) suggests that the southern kingdom of Judah – where Dan was initially directed – ‘arose’ as the vestige of Dan which had graduated to the 99-month refinement of the 8-year Set/Dan measure (to be subsequently identified with Bran, or Abram who conceived Isaac at 99). Rendering the ‘lost tribes’ of the northern kingdom of Israel, the contingent of Hyksos and Egyptian radical priests who – returning to the Bel measure after the 100-month 8-year calendar proved so ineffectual⁴⁴⁶ – were ‘ignominiously’ absorbed.

Abram, it becomes apparent, was *contrived* to embody the ancestor of the 99-month sect only; just as Yahweh –

445 the first three portions (all east of the Jordan) were allotted to the eldest sons of three of the mothers of Jacob's children, while Dan – eldest son of the fourth – received the twelfth (or thirteenth) portion overall, described as the last of seven remaining portions (following the disposal of the eastern precincts and the portions for Judah, Ephraim and the western half-tribe of Manasseh); Judah, whose portion was adjacent to that of Dan in the south (and consumed the potentially more resistant section of Philistia to the south, than that of Dan), therefore received the fourth apportionment *in place of Dan*; while Dan's removal to the north placed the tribe among the four northern tribes of Zebulun, Issachar, Asher and Naphtali whose portions fell eighth through eleventh (or ninth through twelfth, given that Manasseh received both the third and sixth apportionments); Dan, in effect, accorded the youngest's portion [JOSHUA XIII – XIX]

NOTE that the interchangeability of Judah (*fourth son* of Jacob), and Dan (fifth son), is prefigured in the position of the tribe of Dananites descended from the youngest or *fourth son* of Javan, *fourth son* of Japheth ($4 + 4 = 8$ -year cycle) [GENESIS X: 2–4]

446 occasioning sustained accounts of apostasy which characterized the divisive 430-year era of the Judges (*cf.* 430 years in Egypt)

whose introduction in the patriarchal narrative is pointedly belated⁴⁴⁷ – became the distinguishing characteristic of the Hebrew (in contrast to the Hellenic) 8-year measures. The single intercalary day, elevated to ‘divine’ status with the advent of the 100-month calendar – in that the name *Yahweh* ‘magically’ transmutes the *five* annual intercalary feast days of the Babylonian and Egyptian calendars into *one*, figuratively (comprising five vowels)⁴⁴⁸ and literally (*ia* = “five”) – became more supreme with the refinement of the 99-month calendar, which required but a single day to be intercalated in an entire 8-year cycle.⁴⁴⁹

It bears recalling that the Amorites – perceived by the Egyptians to be pervasive throughout Palestine⁴⁵⁰ – were essentially Akkadians like Narâm-Sin, and that differences between ‘tribes’ (as related in the Bible), in my view, arose from ideological (*ie*, calendrical) not ‘ethnic’ discrepancies. The northern tribes who retained the primitive 100-month variant of the 8-year calendar, in other words, would be easily assimilated into the prevailing Bel culture of Syria once the limitations of their measure became palpable,⁴⁵¹ because they shared common customs.⁴⁵²

Despite reference in the cited passage from *Joshua* to “... these towns with their villages”, the tribe of Dan appears to have been ‘allocated’ a single site only: the town of Leshem,

447 his name *first* revealed to Moses (*cf*, p27, fn79) [EXODUS VI: 2/3]

448 YHWH composed of characters representing vowels in Greek; IEYOA – as *secreted* in the Boibel-Loth calendar [GRAVES, *The White Goddess*, p267] – a transliteration of Greek vowels

449 $365.2422 \times 8 = 2921.9376$ days (while the 8-year 99-month calendar comprised 2921 days – requiring .9376 days or 22½ hours to effect its justification with the solar cycle)

450 Amu (‘*amw*), Martu, Amarutu designating “the Amurrite population of Syria-Palestine in the Middle Bronze Age...the Egyptians recogniz[ing] a direct ethnic and cultural continuity in these foreigners with those of Syria-Palestine...” (p76, fn204; p121, fn340); while the term ‘Hyksos’ – *hka haswt* – denotes “ruler of foreign lands” [VAN SETERS, *The Hyksos*, p189]

451 when the 8-year calendar fell irremediably out of step with the solar and lunar cycles – despite the scheduled adjustments

452 as easily as a Greek Orthodox Christian in Canada ‘converting’ to High Anglican today

whose name was promptly changed to Dan. This further suggests that Shem, eldest son of Noah and progenitor of Dan (symbolizing the 56-year nodal regression round), was superseded by Dan with the refinement of the 99-month measure – that Dan, in effect, represents the interim ‘title’ of select Shemitic tribes (or that the 99-month *octaeteris* comprised the chosen measure of the Israelites before their adoption of the preferred 19-year 235-month calendar).⁴⁵³

It also situates the relocated tribe of Dan 25 miles from Tyre, the city from which princess Europa was abducted to Crete by Zeus, prompting the pursuit of Cadmus and his brothers (which resulted in the introduction of the alphabet into mainland Europe). And if the phrase identifying the territory of Dan – “these towns with their villages” – is taken literally, it conjures an area which may have extended even nearer to (perhaps even penetrating) the port of Tyre. Which focuses disparate traditions – Egyptian,⁴⁵⁴ Greek⁴⁵⁵ and Israelite⁴⁵⁶ – at a common locus: all concerning a *change* of rule (or measure) in the antecedent culture.

- 453 recollect that ‘the 56-year round’ incorporates seven ‘8-year measures’ (*Dan*, as noted, cognate with *thanatos* signifying an underworld or ‘great year’ measure, with emphasis on the terminal or seventh focal phase: the waning crescent of Osiris – Lord of the Underworld – harbouring the 29th and 30th phases of the radical variable-month 8-year calendar)

NOTE that the 19-year calendar, while retaining the variable month, dispensed with the need for intercalary days: the convergence of 235 lunations (6939.6882 days) with 19 solar cycles (6939.6018) resulting in a discrepancy of 2 hours 4 minutes 25 seconds every 19 years – which requires just over 11½ cycles of 19 years (219 years) to accumulate an entire day

- 454 Byblos – 10 miles from Sidon (*set-dan*) – was the place where Osiris (Lord of Waning Cycle), interred by Set the first time he dispatched him, was recovered by Isis (p85)

- 455 Poseidon (father of Agenor king of Tyre) also sired with Tyro (Sidon + Tyre), Pelias (Bel) the usurper of Aeson’s (and Jason’s) throne in Thessaly; Europa (princess of Tyre) bore the progeny of Zeus to Crete; Cadmus seeded the soil of Thebes with the ‘sown men’ or Spartoi; and Thales of Tyre and Pythagoras of Sidon redeployed the ancient mysteries during the era of the Tyrants

- 456 Ahab eighth ruler of the northern kingdom of Israel, married princess Jezebel, daughter of the priest-king of Tyre Ethbaal (*cf*,

Yet during the reign of Ethbaal father of Jezebel, the god of Tyre was Baal – the campaigns of Seti I and Rameses II having routed the rebels and *reasserted* the Bel measure throughout the Levant; Europa, an earlier princess of Tyre, having been forced by their advance to relocate to Crete – her brothers settling even further afield.⁴⁵⁷ Scriptures and myths alike convey with these accounts of dispersal, the impression of cultural diffusion rather than transmission – measures of dissent prevailing through escape.

Eteobutadæ, the hereditary priesthood of *Poseidon* Erechtheus); Hiram king of Tyre helped David build his palace and Solomon the temple, at their new seat in Jerusalem; Carmel comprised the home of Abigail mother of David's second son, Daniel

- 457 [A] Cadmus proceeding from Rhodes to Thera, Edonia [Dan] and Delphi before founding Thebes; [B] Phoenix from Phoenicia (where Osiris, or terminal Set, was interred) to Punic Carthage; [C] Cilix to Cilicia near the Pyramus River (where Typhon or Set was conceived – p119, fn336); [D] Thasus initially to Olympia before settling on the island of Thasos (centre – with adjacent Samothrace – of the Kabeiroi); [E] Phineus to Bithynia – fastness of the Kabeiroi surveying the Bosphorus (which bisects 'the land of the Underworld or Dan Measure' [Bi-*thanatos*] with Thrace – home of the Fir Bolg (cf, Bulgaria) – on the European side) NOTE that Feinius Farsaidh (cf, p143, fn404) king of Scythia and "founder of the Milesian race" was said to have "established a University at Magh Seanair near Athens, over which he and Gadel and Caoith presided. These formed the Greek, Latin and Hebrew letters [alphabet]." He may be equated with "Fœneus father of Atalanta, the first man to plant a vineyard in Greece. According to Greek legend, this Fœneus, or 'Ceneus' when he lost his initial *digamma*, was a son of Ægyptus and came from Arabia [cf, p105, fn285 – *phœnix* in Arabia], which perhaps means Southern Judæa; exactly the same account is given by the Irish bards of Feniusa Farsa, who was turned out of Egypt 'for refusing to persecute the Children of Israel', wandered in the wilderness for 42 years and then passed northward to the 'Altars of the Philistines by the Lake of the Willows' – presumably Hebron in Southern Judæa, celebrated for its fish-pools and stone altars – thence into Syria, after which he appears in Greece [supporting my thesis of putative rebel priests relocating to Judæa, north to Syria and beyond to Greece]. Fœneus's queen was Althæa, the Birth-goddess associated with Dionysus [grandson of Cadmus]; and it is known that *foinos*, wine, is a word of Cretan [European] origin." [GRAVES, *The White Goddess*, pp252/3]

While literary sources establish the founding of Carthage near the earliest of the three cataclysms (p96, fn259) thought to have devastated the Mediterranean (747–687 BC),⁴⁵⁸ archæology from the site points to a period nearer the inundation of 702.⁴⁵⁹ And Seti I and his son Rameses II – said to have ruled during the fourteenth and thirteenth centuries BC, according to conventional chronology⁴⁶⁰ – are now considered by others besides Velikovsky⁴⁶¹ to have reigned more recently⁴⁶² (given the perplexing absence of data from the so-called Dark Age: 1200–700 BC).⁴⁶³

458 “Classical authors put the foundation of Carthage by Tyre between 846 and 746 BC. While the most reliable source, Menander of Tyre as transmitted by the Jewish historian Josephus (1st century AD), gives no precise date, he does say that the expedition left Tyre in the seventh year of King Pygmalion’s reign, led by his sister Princess Elissa. Fortunately, Pygmalion can be dated to within a few years by links between the Tyrian king list and Assyrian records and the voyage to Carthage be thus placed between 805 and 799 BC.” [JAMES, *Centuries of Darkness*, p53]

459 “A solution to the problem [of a lack of supporting archæology] was first proposed by Emil Forrer, who argued that Menander’s *qrthdst*, or New City, was not Carthage, but Kition on Cyprus. The existence of a *qrthdst* in Cyprus is proved by 7th-century Assyrian records. This Cypriot *qrthdst* having changed its name by Menander’s time, he would naturally have assumed ‘*qrthdst*’ referred to the ‘Carthage in Libya’ he knew. Given this, nothing remains to support a foundation of Carthage before about 720 BC. Nor is there any reason to see Phœnicians in the West much earlier than 750 BC.” [JAMES, *op cit*, p55]

NOTE that the New City of Carthage venerates moon-god Car

460 Seti I (1318–1298 BC); Rameses II (1298–1232 BC) — W.S. Smith Chronology [ENCYCLOPEDIA AMERICANA VOL X, p14c]

461 “The present reconstruction offers ample evidence that the Nineteenth Dynasty is the same as the Twenty-sixth, and that Seti I, Ramses I, Seti II, Ramses II, and Merneptah are the same as Psammetich (Sethos), Necho I, Psammetich II, Necho II, and Apries (Hophra) of the Greek historians [663–525 BC].” [VELIKOVSKY, *Ramses II and His Time*, p209]

462 “Our compression of Third Intermediate Period chronology results in an overall lowering of the dates for the New Kingdom (18th – 20th Dynasties) by some 250 years [1300–810 BC].” [JAMES, *op cit*, pp257/223]

463 “Above all, we became increasingly convinced that something was seriously wrong with the conventional picture of a centuries-long

Regarding the vertex of Tyre, these re-evaluations afford the refinement that following the conflict between the 100-month and 99-month rebel 8-year sects,⁴⁶⁴ pursuit by the Egyptians drove the priests to Cyprus as well as Crete, Cilicia, Bithynia,⁴⁶⁵ Thasos and Thebes. Then, after several generations, the three cataclysms left coastal settlements in ruins, their abandonment necessitated by the pollution of stream and store (not to minimize the *devastation* wreaked by the tsunamis). Subsequent resettlement of the western Mediterranean introduced the competition of Phoenician and Hellenic colonies, observing disparate measures⁴⁶⁶ – the task of reconstruction increasingly obscuring insight into their myths and legends, among successive heirs, until the figurative core of the texts became all but impermeable.

Dark Age descending over a vast area at the end of the Late Bronze Age c. 1200 BC....Everything we found confirmed our suspicion that the original spanner in the works was the Egyptian time-scale, and that the ‘centuries of darkness’ inserted into the histories of so many areas between 1200 and 700 BC were largely illusory.” [JAMES, *Centuries of Darkness*, pp xvii/i]

464 Zeus and the Olympians battling his father Cronus and the Titans (*cf.* p139, fn398)

465 “...Phineus to Thynia, a peninsula [bisected by the Bosphorus strait] separating the Sea of Marmara from the Black Sea...” [GRAVES, *The Greek Myths*, p195]

A NOTE that the strait at the Ægean end of the Sea of Marmara – the Hellespont – presently bears a name (the Dardanelles) derived from Dardanus the legendary founder of Troy. Son of Zeus and Electra (one of the *seven* Pleiades, daughters of Atlas – *cf.* p112, fn312), he removed to Phrygia from Samothrace (or variously Arcadia or Crete) where he established the city of Dardanus (*cf.* Dan) and erected the temple of Athena (Aten)

B NOTE further that the surface current of the Bosphorus runs south while the bottom current runs north, making passage from the Ægean to the Black seas next to impossible before the discovery of the undertow (a basket of stones lowered from the vessel, allowing it to be towed north by the current)

466 the Phœnicians, the 70-year Bel measure (restored by Seti I and Rameses II); and the Greeks, the 8-year Dan measure
NOTE that after founding Carthage, Phoenix returned to Canaan (which he renamed Phœnicia), where he sired Adonis (*cf.* Dan) – echoing the term substituted for the unspeakable ὕμνη in Bible readings: *adonay*, “my Lord” [*New Bible Dictionary*, p430]

It bears noting that the bronze statue of Tyrian Heracles erected by Thasus at Olympia,⁴⁶⁷ before proceeding to Thasos, supported “a club and a bow” – reminiscent of the image of the chalk giant of Cerne Abbas, Dorset⁴⁶⁸ whose right hand brandishes a massive club incorporating seven pronounced serpentine arcs. As Graves points out, “Tyrian Heracles, whom Theseus worshipped at Olympia, was the god Melkarth”⁴⁶⁹ – origin of the term *Mercury*, the Roman Hermes or Thoth.⁴⁷⁰ And giants figured the embodiment of the ‘great year’ – Goliath (the 70-year Bakh ‘great year’) ‘defeated’ by David the father of Daniel (namesake of the Dan 8-year measure) because the cumbrous dual ‘great year’ calendars of the Bel measure (both Bakh and Apis) were effectively superseded by the compact, more integral 8-year lunisolar refinement.⁴⁷¹

THE TROJAN WAR – pitting the forces of Troy⁴⁷² and her allies, against those of Achæa – may prove merely another account of the conflict between the opposing variants of the eight-year measure. Dardanus, as noted (p158, fn465A), either removed to the Troas from Crete (where Europa was taken), Arcadia (bordering Achaia and Olympian Elis in the Peloponnese), or Samothrace (the island refuge of the Kabeiroi)⁴⁷³ – variants, interpreted as an itinerary, which

467 GRAVES, *The Greek Myths*, p195

468 BORD, *Mysterious Britain*, p167

469 GRAVES, *op cit*, p197

470 Phoenician (and Cretan) survivals in Italy, introduced directly from the Levant arguably by colonists repopulating abandoned areas several generations after the cataclysms of 747–687 BC

A NOTE that the bow is particularly appropriate to Melkarth as the emblem of half-moon, the phase with which Thoth, Hermes or Mercury were associated

B NOTE further that Greek Heracles (son of ‘Zeus disguised as Amphitryon’) was born five generations after the abduction of Europa and pursuit by her brothers [GRAVES, *op cit*, p195]

471 the Cerne Abbas giant boasting *eight* ribs [BORD, *op cit*, p167]

472 Troy perhaps not coincidentally a metathesis of Tyre

473 dar + Dan = “*haven* (Arabic) of Dan”; while the Greek root *tharseo* (*be bold*, or *daring*) adds the dimension of *precocity* – connoting a ‘premature’ elaboration of the Dan measure

summon a scenario of diffusion consonant with the search for Europa by her brothers. Among the five, Cadmus and Thasus alone scour mainland Greece, yet Thasus – the sole brother to broach the Peloponnese – removed again to the island of Thasos, after erecting the effigy of Heracles.⁴⁷⁴ In otherwords, the *earlier* 100-month 8-year measure – initially ensconced by the River Alphæus (*alpha* = “white”) at Olympia – was eventually displaced by the priests of the superior 99-month variant, forcing its retrenchment north, ultimately to the islands of Thasos and Samothrace, and the Phrygian littoral of the Troas (where Dardanus founded his city controlling access to the Hellespont).

The conflict *lingered* for ‘nine years’ before being resolved – the 100-month calendar requiring ten intercalary days; the 99-month, but one.⁴⁷⁵ Epeius – the water-bearer⁴⁷⁶ of

474 Olympia – “the second of the two great religious centres of Greece” – hosted the Olympic Games which were purportedly founded by Heracles (a continuous record of victors at the games preserved from 776 BC, affording one of the focal registers for comparative chronology of subsequent history). The statue of Tyrian Heracles which Thasus is said to have erected, curiously precedes “the most famous statue of antiquity” on the same spot: “the colossal statue of Zeus, wrought in ivory and gold over a core of wood, by Phidias [*ca* 460 BC]”. In otherwords, Tyrian Heracles (*ie*, Melkarth or Hermes) presided over the Olympian plain five generations before the games were instituted there by Greek Heracles, son of Zeus whose likeness commanded the prospect 300 years later. [HARVEY, *The Oxford Companion to Classical Literature*, p294]

NOTE that the 4-year Olympiad interval preserves a distinct aspect of the 8-year 100-month calendar arguably introduced into the Peloponnese by Thasus (in the name of Melkarth)

475 $8 \times 365.2422 = 2921.9376$ (the 100-month calendar comprising 2912 days; the 99-month, 2921) – in otherwords, both calendars would converge with eight actual solar cycles on ‘the tenth day following the completion of the 100-month cycle’ (*ie*, day 2922)

476 “On the divine level this war was fought between Aphrodite, the Trojan Sea-goddess, and the Greek Sea-god Poseidon – hence Priam’s suppression of Poseidon’s priesthood [the priest of the *Eteobutadæ*, or hereditary priesthood of Poseidon Erechtheus, having been stoned to death *nine years* earlier – the water gods ‘consuming’ the critical phase (waning crescent) of the variable-month measures].” [GRAVES, *The Greek Myths*, p698]

the House of Atreus (father of Agamemnon and Menelaus) – who constructed the Wooden Horse, contributed “30 ships from the *Cyclades* to [the siege of] Troy”⁴⁷⁷ (alluding to a *cycle* of thirty days: *ie*, lunation). While the number of men secreted in the Horse varies in different versions of the tale – from 23, 30, and 50, to 3000.⁴⁷⁸

Dedicated to the Greek goddess Athena, the Horse was ultimately squeezed through the gates into the city, where Helen, circling it three times, “teased the hidden Greeks by imitating the voice of each of their wives in turn”. Then, after the Trojans were asleep, “at midnight, just before the full moon rose – the seventh of the year...” the trap-door was sprung releasing the Horse’s awful secret. “Echion, son of Portheus, leaping out first, fell and broke his neck...”⁴⁷⁹

The trap-door in the Wooden Horse was “fitted into one flank [with] large letters cut on the other which consecrated it to Athene”.⁴⁸⁰ The 50 warriors who emerged, according to the version of Apollodorus, thus countered ‘doubles’ on the other flank, composed of letters (the alphabet drawn from lunar phases). While the death of Echion reduced the sum of ‘100 lunation representatives’ to 99 – epitomizing the victorious 8-year measure of 99 months.⁴⁸¹

477 GRAVES, *The Greek Myths*, p693

478 “Into this horse Ulysses persuaded 50 (or, according to the author of the *Little Iliad*, three thousand) of the doughtiest to enter [footnote: According to Tzetzes the number of men who entered into the Wooden Horse was twenty-three, and he gives the names of them all (*Posthomericæ*, 641–650). Quintus Smyrnæus gives the names of thirty, and he says that there were more of them (*Posthomericæ*, xii.314–335).]” [APOLLODORUS, *Epitome* v: 14, VOL II, p231]

479 *Portheus* signifying “door of the god” – the cavity accommodating ‘an aggregate of lunar spectres’ [GRAVES, *op cit*, pp693–6]

480 GRAVES, *op cit*, p693

481 $23 - 1 = 22$ (the number of letters in the Hebrew alphabet); $30 - 1 = 29$; $60 - 1 = 59$ (the variable-month measure); $3000 = 30 \times 100$ (or 100 generic months) $\rightarrow 100 - 1 = 99$
NOTE that the ‘3000 men’ secreted in the Horse conceals a reference to the 3000 mares of Erichthonius, son of Dardanus, identified as “a synonym of Erechtheus” [GRAVES, *op cit*, p171] *cf*, the hereditary priesthood of Poseidon Erechtheus

The 50 men in the Horse were further countered by the 50 sons of Priam⁴⁸² king of Troy – all of whom died in the war – Hector leader of the Trojan forces (perishing last), being referred to notably as “horse-taming Hector”. The 50 departed Trojans signify ‘dead’ months, equatable with the 30-day, or female, lunation perceived to reside in the realm of the goddess – the underworld (cf. p254) – the improved Dan ‘great year’ including fifty 30-day months; while the 49 prevailing Achæans represent the aggregate of opposed 29-day, or male, months completing the 8-year cycle.

The Horse, of course, represents the 8-year Dan ‘great year’ – hearkening back to the wooden bull of Mycerinus which epitomized the 25-year Apis ‘great year’ (cf. p98, fn265) and the lamb secreted by Medea in the image of the goddess (p128, fn365). As Zeus abducted Europa, so Paris abducted Helen – the lunar goddess⁴⁸³ circling the Horse three times before its cargo of phases was disgorged, in a mime of the sun rising three times during the dark interlude before the waxing crescent of a new lunation appears. The voices she imitated identify the wives of the secreted ‘lunations’ as aspects of herself – each visible phase of the cycle mated in the underworld⁴⁸⁴ to a different ‘face’ of the goddess.

The Horse sustains a further association with Poseidon (and the precipitation of an 8-year Dan ‘great year’ conflict involving Sidon – the *marine* phase of the waning crescent harbouring the variability which distinguishes the variable-month measure) through his title *Hippios*, and ‘children’

482 “Fifty I had, when the sons of the Achæans came; nineteen were born to me of the same womb, and the others women of the palace bore.” [HOMER, *Iliad* XXIV: 495, VOL II, p599]

483 *Helen* signifying “moon, or basket used for offerings to the Moon-goddess” [GRAVES, *The Greek Myths*, p763]
NOTE also that her brothers Castor and Pollux (Polydeuces) – known as the Dioscuri, or children of Zeus – were destined to “spend alternate days in Heaven and Hades”, a reference to twin full moons, the first of which descends into the underworld while his double assumes their seat on high [HARVEY, *The Oxford Companion to Classical Literature*, p148]

484 the goddess, in *all* her guises, *out of view*: the moon’s daytime ‘spectre’ thereby figured as a complicit ‘a-spect’

Arion⁴⁸⁵ (with Demeter) and Pegasus (with Medusa).⁴⁸⁶ The associated horses of Diomedes, king of adjacent Thrace, were ‘tamed’ by Heracles as the *eighth* of his celebrated Labours – their proclivity for human flesh symbolizing the *sacrifice* of ten days demanded by the 100-month calendar, which the mighty hero of Olympia succeeded in weaning them of, with the propitiation of a *single* victim: the *king* himself.

The seventh ‘full moon’ of the ‘year’ reflects the seventh focal (“full” = *identifiable*) phase of a lunation – the waning crescent, on which the variable month was commuted.

Intimations that Poseidon spawned the Trojan as well as the Achæan measures may be drawn from the association of his hereditary priesthood – the *Eteobutadæ*⁴⁸⁷ – with the

- 485 Arion, mount of Adrastus king of Argos and leader of the Seven against Thebes (and the subsequent assault by the *Epigoni*), ties the Dan conflict back to the Peloponnese (recalling Thasus) and the campaigns against Thebes, as early sallies of the 99-month forces against the entrenchment of their 100-month antecedent
- 486 Demeter, Medusa and Diomedes (as well as Medea) all share the root “med”/“met” resounding the etymon of Tiamat the goddess who divided the heavens from the earth (as the celestial or male months divided the rule of the Dan eight-year measure with their female underworld counterparts)
- 487 Cadmus, on setting forth from Tyre, first put in at Rhodes where he “dedicated a brazen cauldron to Athene of Lindus, and built Poseidon’s temple, leaving a hereditary priesthood behind to care for it” (*cf.* Ethbaal priest-king of Tyre and father-in-law of Ahab, the *eighth* ruler of the kingdom of Israel – p144); “Rhodes was the property of the Moon-goddess Danæ – called Cameira [*cf.* Camarina, ‘the moon’, a Greek name for the city of Ur in Babylonia, according to Eupolemus — *New Bible Dictionary*, p1231], Ialysa [*cf.* Yahweh], and Linda...” home to the Telchines who were displaced by the offspring of the Telchine princess Halia (later deified as Leucothea or the White Goddess) and Poseidon. Their six sons were relegated to the underworld, while their only daughter, Rhode, bore seven sons to Helios (son of the Titans Hyperion and Theia). “They became famous astronomers, and had one sister named Electryo [“amber”], who died a virgin [*cf.* nine Regents (p92, fn248n) with the goddess aspect of the twins Isis and Nephthys embodied by Electryo alone] and is now worshipped as a demi-goddess [*ie*, semi- or half-goddess]. One of them, by name Actis, was banished for fratricide, and fled to Egypt, where he founded the city of Heliopolis, and first

son of Dardanus: Erichthonius (whose 3000 horses identify the earlier 100-month variant, while further tethering him to the spectre of Poseidon Hippios). The story goes, Poseidon

taught the Egyptians astrology, inspired by his father Helios. The Rhodians have now built the Colossus, seventy cubits high [cf. the 70-year Bakh 'great year' cycle of the Egyptians], in his honour." [GRAVES, *The Greek Myths*, p195/155–7]

- A NOTE that *Helios*, like Zeus, a son of Titans, introduced a new measure to Rhodes which refined that of his cousin Poseidon. His siblings – Selene (moon) and Eos (dawn) – make it appear that Helios always represented the sun, yet the etymon 'helle' as encountered in the names of *Hellen* (the son of Deucalion and father of Dorus, Xuthus and Æolus) and *Helle* (the son of Athamas who fell from the golden-fleeced ram [*ie*, 350-year Mendes 'great year'] en route from Thebes to Colchis, lending his name to the Hellespont), merely denotes "bright" – which may also apply either to 'a lunation' or 'full moon'. An extra son greater than the brood of Poseidon, clearly signifies the addition to the lunar pantheon, of Set (first waning phase) – *Helios* in this respect, cognate with 'hell' the abode of Set-tan – signal god of the variable-month Set/Dan measure. This interpretation is fortified by the equation of the name of *Halia*, mother-in-law of Helios, with *Leucothea*. While the four "white" horses of the 'chariot of the sun' are surely the four quarters of a lunation.
- B "The Sun's subordination to the Moon, until Apollo usurped Helius's place and made an intellectual deity of him, is a remarkable feature of early Greek myth. Helius was not even an Olympian, but a mere Titan's son; and although Zeus later borrowed certain solar characteristics from the Hittite and Corinthian god Tesup and other oriental sun-gods, these were unimportant compared with his command of thunder and lightning. The number of cattle in Helius's herds... is a reminder of his tutelage to the Great Goddess: [350] being the number of days covered by twelve complete lunations, as in the Numan year (Censorinus: xx), less the five days sacred to Osiris, Isis, Set, Horus, and Nephthys. It is also a multiple of the Moon-numbers fifty and seven. Helius's so-called daughters are, in fact, Moon-priestesses – cattle being lunar rather than solar animals in early European myth; and Helius's mother, the cow-eyed Euryphæssa [or Theia], is the Moon-goddess herself. The allegory of a sun-chariot coursing across the sky is Hellenic in character; but Nilsson in his *Primitive Time Reckoning* (1920) has shown that the ancestral clan cults even of Classical Greece were regulated by the moon alone, as was the agricultural economy of Hesiod's Bœotia." [GRAVES, *op cit*, pp156/7]

abandoned the Trojans in favour of the Achæans after they refused to pay for the fortification he erected with the help of Apollo – the Trojans subsequently stoning their priest of Poseidon to death. The fact that they were without a priest of Poseidon for nine years – throughout the Trojan War – implies a parallel conflict between their ‘fortification’ of the eight-year calendar (requiring ten additional days) and that of Poseidon’s improved 99-month ‘corral’ (whose circuit could be secured with a single reinforcement).

It bears noting that the areas associated with Dardanus – Crete, Arcadia, Samothrace and Phrygia – were considered among the most ancient,⁴⁸⁸ suggesting that the tale of his removal to Troy was intended to convey antecedence. The introduction of the images and cult of the Dioscuri to the island of Samothrace by Dardanus and his son Idæus, is credited with instituting the college of Salian priests (or Curetes as they were known in Crete),⁴⁸⁹ which spread the Samothracian Mysteries to Troy, under the spell of Cybele.

488 “Whether then the Phrygians are really proved to be ancient by the goats in the story [of Psammetichus — RAWLINSON, *The History of Herodotus* II: 2, VOL I, pp110/1]; or the Arcadians by the poets who describe them as *older than the moon*; or, again, the Egyptians by those who dream that this land first brought to light both gods and men; still, not one of these nations existed before this world.” (emphasis added)
[CLEMENT OF ALEXANDRIA, I: 6, p15]

NOTE that in the story of the goats, Phrygia is deemed of greater antiquity after the children sequestered from human speech, with the goats, utter the word *becos* (bread) – commentators like Rawlinson and Marincola (*Herodotus: The Histories*, pp86/7, 560) failing to entertain the possibility that this may have been intended by Herodotus as a ‘Trojan joke’: the bleat of the goats clearly cuing the kids with the *sound* of the word (in otherwords, ‘Trojan speech derived from animals’ extending a dig at Helen’s abductors whose ‘sage’ Horse-sense proved so humiliatingly deficient). The priests who told Herodotus the tale, however, may have dwelt on another insinuation: that the pre-eminent ‘language’ of ancient authority was that of ‘the ram’, epitomizing their 3950-year Menes and 350-year Mendes ‘great year’ cycles which neither the Phrygian 100-month nor Greek 99-month 8-year Dan ‘great year’ measures could ever dethrone!...

489 GRAVES, *The Greek Myths*, p622

Following the defeat of Troy, Æneas – together with his father Anchises (cousin of Priam), wife Creusa and son Euryleon (Ascanius) – embarked on a *seven-year* quest to Latium, where he was destined to found a new nation. Fifteen generations later, the city of Rome⁴⁹⁰ was laid by his descendants, Romulus and Remus – 432 years after the fall of Troy. The Trojans in Italy came to be known as Albans from the name of their second town, Alba Longa – “long white” town (*cf.* the extended cycle, or ‘great year’ of the lunar cycle).⁴⁹¹ While Æneas – like Cadmus – planted the Trojan colony of Lavinium, on the advice of the Cumæan sibyl (*cf.* Cybele), by tracking a white sow with a litter of thirty young to a secluded stream (*ie*, Okeanos). And the subsequent protraction of Trojan resettlement in Britain precipitated the signal genealogy of Brutus.⁴⁹²

- 490 Æneas 7; Ascanius 38/Silvius 29; Æneas 31; Latinus 51; Alba 39; Capetus 26; Capys 28; Calpetus 13; Tiberinus 8; Agrippa 41; Allodius the tyrant 19; Aventinus 37; Proca 23; Amulius the usurper 42/Numitor; Romulus and Remus – 432 years in total [DIONYSIUS OF HALICARNASSUS I. 70/1, VOL I, pp229–35] NOTE that the seven hills of Rome (like the seven hills of Troy) and the seven-year journey, recollect the seven focal phases of a lunation (p92, fn248F); while the fifteen generations summon the spectre of the full moon which appears on day 15 in the cycle (Ascanius & Silvius half-brothers; Amulius & Numitor brothers) – *cf.* seven rulers of Rome preceding the election of the Consuls
- 491 “In the thirtieth year after the founding of Lavinium Ascanius, the son of Æneas, in pursuance of the oracle given to his father, built another city and transferred both the inhabitants of Lavinium and the other Latins who were desirous of a better habitation to this newly-built city, which he called Alba.” [DIONYSIUS OF HALICARNASSUS I. 66, VOL I, p217] NOTE that the improved “habitation” is erected *in* the 30th year (not following 30 years) implying the inception of the successive measure partway through the ‘year’ – or month (the 29½-day lunation effectively rationalized with the 29-/30-day variable-month Set measure) *cf.* *Saturnia*, the original name of Italy
- 492 Brutus 23; Locrinus, Cambertus, Albanactus 10; [Humber]; Gwendolyn 15; Madden 40; Mempricius, Malin 20; Ebraucus 40; Brutus Greenshield 12; Leil 25; Rud Hud Hudibras 39; Bladud 20; Leir 60; Goneril (Maglaurus Duke of Albany), Regan (Henwinus Duke of Cornwall), Cordelia (Aganippus King of the Franks) 5; Marganus Duke of Albany (2), Cunedagius Duke of Cornwall 33;

THE TOWER OF BABEL symbolizes an earlier calendrical conflict than that of the Trojan War. Babel "...according to Babylonian tradition was founded by the god Marduk [Bel] and destroyed by Sargon c. 2350 BC when he carried earth from it to found his new capital Agade (Accad)".⁴⁹³ While the account in the Bible appears to describe a *place*, the possibility that *Babel* also signifies 'the language of Bel' should not be dismissed.⁴⁹⁴ The account opens with:

"Throughout the earth men spoke the same language, with the same vocabulary." [GENESIS XI: 1]

The original Sumerian calendar of 360 days comprising 60 six-day weeks – for the Six Stations of the visible phases

Rivallo; Gurgustius; Sisillius; Jago; Kimarcus; Gorboduc; Ferrex, Porrex – 27 or 28 rulers (reflecting the number of *visible* phases in the variable male/female month), with the goddess securing 'days' 3, 15, 16 and 17; the first 19 reigns comprising 342 years (the difference between this sum and the 350-year Mendes 'great year' of the Bel measure, surviving in the 8-year 'great year' – which appears to be supported by the *remainder* of 8 names in the genealogy following Cunedagius, without explicit reigns; in otherwords, the part-genealogy of 342 years plus the terminal 8 names without regnal durations protracts a sum of 350) [GEOFFREY OF MONMOUTH, *The History of the Kings of Britain*, pp56–69; cf. DRUMBOLIS, *God's Wand*, pp131/2]

A NOTE that the 18 rulers of the Alban genealogy of 432 years are recollected in 'the part-genealogy of Brutus' totalling 342 years ($342 \div 19 = 18$); while the number of Alban rulers proves equal to the number of factors in the sum 432 (2, 3, 4, 6, 8, 9, 12, 16, 18; 24, 27, 36, 48, 54, 72, 108, 144, 216) *ie*, $432 = 18 \times 24$ or 16×27 *etc*

B NOTE further that a compound of the factors '18' and '19' arises in the 56-year eclipse cycle ($19 + 19 + 18$) detected by Hawkins from readings taken at Stonehenge (cf. pp248–50): recollected the lineage of Hector's 19 sons with his wife (p162, fn482); his 18 Alban 'descendants' (p166, fn490); and the 19 kings with explicit reigns in the protracted Alban genealogy in Britain, presiding over Stonehenge (cf. Albanactus, son of Brutus)

493 *New Bible Dictionary*, p110

494 *Ba* was the external (*ie*, natural) manifestation of the soul, depicted as a man-headed hawk in Egyptian iconography (the hawk representing Horus the waxing crescent; the man-headed hawk representing one who comprehends what Horus initiated: *lunation*) [BUNSON, *A Dictionary of Ancient Egypt*, p41]; *ba'al* (Hebrew) signifies "master", "possessor", "husband"; *Ba-bel* intimating 'the essence of Bel' and 'master of Bel sense'

(*cf.* p92, fn248E) – was disrupted by the introduction of a seventh focal spectre: the first waning phase on day 17 in the cycle. The faction of priests led by Sargon broke away from the traditional measure with their observance of the 56-year nodal regression round, ultimately displacing the old calendar (for a time).⁴⁹⁵ A conflict characterized in the Bible as the “confusion” of *language*.⁴⁹⁶

Nimrod – “the first potentate on earth”⁴⁹⁷ – presided over the empire which succeeded this ‘confusion of languages’, and “first to be included in his empire were Babel, Erech and Accad, all of them in the land of Shinar”.⁴⁹⁸ Nimrod (son of Cush son of Ham son of Noah) may be identified with Narâm-Sin, grandson of Sargon who “destroyed” the ‘abomination’ of Babel to establish his new ‘seat’ of Akkad – the list of ‘cities’ in the account connoting a progression – from the ‘soil’ of Babel.⁴⁹⁹

The 5 intercalary days – or Epact (*cf.* p64, fn177) – added to the new calendar on its introduction to Egypt, were held to be the birthdays of the children of Nut (Set, Osiris, Isis, Nephthys and Horus the Elder), won for them from the moon in a gamble with Thoth for the seventy-second part of a year. While the number of languages which resulted from the ‘confusion’ at Babel, amounted to 72.⁵⁰⁰

With the advance of the variable-phase month of the Set measure, the interval required to adjust the calendar was contracted to a single intercalary day symbolized by the term *Yahweh*, rising from the Sumerian root *ia* signifying “five” (*cf.* p151, fn440): *ie*, a *single* day concentrating the old-measure *five*. Composed of five vowels (in Greek), the term

495 through four generations: Sargon 56; Rimush 9, Manishtushu 15; Narâm-Sin 56; Sharkalisharri 25 [KRAMER, *The Sumerians*, p330]

496 “It was named Babel therefore, because there Yahweh confused the language of the whole earth.” [GENESIS XI: 9] – *balal* (Hebrew) denoting “confusion” or “mixing”; the ‘language’ referred to, being the calendar or ‘language of cycling time’

497 GENESIS X: 8

498 GENESIS X: 10

499 the improved insights of Akkad refined from the *spoils* of Babel, comprising the new Bel measure (*cf.* p51)

500 $360 \div 72 = 5$ [GRAVES, *The White Goddess*, p252]

Yahweh entertains an arresting parallel in the enigmatic Ε at Delphi, which even Plutarch – “a member of the college of priests at Delphi”⁵⁰¹ – could not elucidate.⁵⁰²

Delphi, the most sacred place in Greece, was regarded as the sanctuary of Apollo, god of *light*, music, medicine and prophecy. Four days after his birth to Leto⁵⁰³ (on the ninth day of her labour)⁵⁰⁴ he pursued the Python sent by Hera to harrass Leto, “to the Oracle of Mother Earth at Delphi, a city so named in honour of the monster Delphyne,⁵⁰⁵ his [*ie*, Python’s] mate, and there despatched him beside the

501 HARVEY, *The Oxford Companion to Classical Literature*, p336

502 “The Greek name for this letter was ΕΙ, and this diphthong, in addition to being used in Plutarch’s time as the name of Ε (which denotes the number five [being the fifth letter of the Greek alphabet]), is the Greek word for “if”, and also the word for the second person singular of the verb “to be” (thou art).” [BABBITT, *Plutarch* v, ‘The Ε at Delphi’ Introduction, p194] NOTE here the cognation with *Yahweh* (composed solely of vowels): “In form the divine name *Yahweh* is either a simple indicative or a causative indicative of the verb ‘to be’...” [New Bible Dictionary, p812]

503 the new moon appears in the sky following three days and two nights in the underworld, the fourth day proving its first free from obligations on high, to ‘pursue private matters’

504 Apollo – “a seven-months’ child” [GRAVES, *The Greek Myths*, p76] signifying his inclusion among the seven focal spectres (cf, p92, fn248F) – was delivered “on the ninth day of labour” [GRAVES, *op cit*, p56] indicating the quadrant of the gibbous or convex phases as his precinct (introduced with the birth of his half-brother Hermes – symbolizing half-moon which appears on day nine in the lunar cycle – to the nymph Maia directly before the birth of Apollo to Leto). Apollo, as noted (p120, fn339) – equated with Amon – represents the first full moon on day 15.

505 despite the observance at Knossos in Crete, of “a *Dolphin Apollo*, god of the dolphins”; the survival of “Delphic coins dating back to 750 BC engraved with dolphins”; the presence of Cretan votive artifacts at Delphi; and the apparent derivation of the oldest Delphic calendar from that of the Cretans; authorities maintain that “there does not seem to be a real connection between the word Δελφοι (*Delphi*) and the word Δελφινι (*delphini*: *dolphin*); but *Delphi* does have an immediate connection with several ancient Greek words deriving from the root δελφ, meaning *concave* [summoning the spectre of lunar crescent].” [SAKELLARÍDIS, *Delphi*, pp10/1]

sacred chasm”.⁵⁰⁶ Apollo claimed the site, installing his own priestess, the Pythia, atop Python’s plot.⁵⁰⁷

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“The first stumbling, obscure syllables of divination were uttered upon this rock by a woman: her name was Sibyl [*cf.* Cybele]. Later, it was believed that the original temple, enclosing in its inner sanctuary the sacred cleft, was built on this very spot. A much later successor to the Sibyl, according to Strabo (67 BC – 23 AD) was Phemonæ, who was then succeeded by Pythia. Seated upon the great cauldron of the oracular tripod inside the temple, cleansed with water from the Castalian spring, chewing leaves, and holding a branch of laurel, she delivered oracles to the Θεοπρόποι (*theopropoi*), those who had come to consult the god.” [SAKELLARÍDIS, *Delphi*, pp12/3]

The tripod – protecting the priestess from succumbing to the intoxicating vapours of the cleft – sported a *concave* seat or cauldron on three supports (modelled on the three days between lunations from which waxing *crescent* emerges).

The sacred opening was initially discovered, reputedly, by a shepherd from adjacent Mt Parnassus whose goat strayed near the entrance. Overcome by the fumes, he “grew drunk and uttered strange, incomprehensible words”.⁵⁰⁸ Which refers to the allegorical nature of lunar myth – the goat a conspicuous symbol of ‘great year’ measure (*cf.* Mendes); while *Kuretas*, the name of the shepherd (*cf.* Hyksos as shepherd-kings), resounds that of the fraternity of Cretan priests, or *Curetes*,⁵⁰⁹ who prefigured the associated Salian college of Corybantes⁵¹⁰ at Samothrace and Troy under the ‘direction’ of Cybele (*cf.* p165, fn489). The oracular aspect of

506 GRAVES, *op cit*, p76 – Graves equating Mother Earth in this myth with Hera “or Delphyne in her prophetic aspect” [p80]

507 “There can be no doubt that before Apollo’s appearance, the Oracle was already in existence, though more humble and not so well known; it was dedicated to the most ancient (probably) goddess of the Greeks, *Earth*, to her husband Poseidon, and at a later date, to the goddess *Themis*.” [SAKELLARÍDIS, *Delphi*, p8]

508 SAKELLARÍDIS, *op cit*, p12

509 the shepherd’s name given as Κορητᾶν (*Coretas*) by Delphian Plutarch [PLUTARCH, *Moralia* 433: 42, VOL V, pp474/5]

510 the ‘wild dancing’ of both the Curetes and Corybantes alludes to the complex ‘choreography’ of the extended lunar cycle of the ‘great year’ (*cf.* ‘the Temple of the Dancers’ or *nahual*, p261)

Delphi, therefore, unravelled threads from Crete, the Curetes, Sibyl, Cybele, Apollo, the dolphin, Mendes, the wild dance and the Greek term for *concave*, together in a web of lunar etymons, rooted to the prophetic imperative⁵¹¹ underlying calendrical pursuits. An interpretation further supported by the signal age of the Pythia.⁵¹²

A reconstruction of the temple site raises the suspicion that its earliest function may have been as a sanctuary for the college of priests,⁵¹³ preserving a statuary *procession* of calendrical mnemonics along its course – figures, columns and busts amid the shrines – facilitating the enumeration of an *ordered* measure. The first stone temple⁵¹⁴ supposedly succeeded three earlier ‘edifices’ variously of laurel-wood, beeswax and bronze – conjuring a vestiture traditionally bardic (laurel), nocturnal (candle) and smithic (bronze

511 “The herdsman in charge of the goats marvelled at the strange phenomenon and having approached the chasm and peeped down it to discover what it was, had the same experience as the goats, for the goats began to act like beings possessed and the goatherd also began to foretell future events.” [DIDORUS XVI. 26: 3, VOL VII, p311]

512 “It is said that in ancient times virgins delivered the oracles because virgins have their natural innocence intact and are in the same case as Artemis; for indeed virgins were alleged to be well suited to guard the secrecy of disclosures made by oracles. In more recent times, however, people say that Echecrates the Thessalian, having arrived at the shrine and beheld the virgin who uttered the oracle, became enamoured of her because of her beauty, carried her away with him and violated her; and that the Delphians because of this deplorable occurrence passed a law that in future a virgin should no longer prophesy but that an elderly woman of 50 should declare the oracles and that she should be dressed in the costume of a virgin, as a sort of reminder of the prophetess of olden times.” [DIDORUS XVI. 26: 6, VOL VII, p313]

NOTE that fifty is the number of female months in the 8-year ‘great year’ – Hypermnestra (the remaining virgin among the Danaïds) subtracted from her siblings, leaving a *complement* of 49 bound conjugally to male months: a penetrating allusion to the 99-month calendar

513 SAKELLARÍDIS, *Delphi*, ‘Reconstruction Map’ (lower cover)

514 that of Trophonius and Agamedes, destroyed by fire, 548 BC [PAUSANIAS, *Description of Greece* x: v.13, VOL IV, p397]

symbolizing the rationalization of lunar [tin] and solar [copper] ‘alloys’). A tradition reportedly “established for the god by comers from the Hyperboreans”⁵¹⁵ – as with the shrine at Delos, birthplace of Apollo (*cf.* p136, fn388). Daphne, prophetess of goddess Earth during the earliest occupation of the site, fled from the pursuit of Apollo, to Crete, “where she became known as Pasiphæ [wife of Minos son of Europa, and mother of the Minotaur]”.⁵¹⁶

The original E at Delphi – crafted, like the temple, from wood – was called “the E of the Wise Men, as though it were an offering, not of one man, but of all the Wise Men in common”.⁵¹⁷ This letter – signifying ‘five’ in ‘one’ – has also been traced to Crete⁵¹⁸ (where, as Thales affirmed in a missive to Pherecydes, the Wise Men had journeyed for insights – p111, fn309) and Sumeria (cradle of Babel, where letters were initially ‘confused’).⁵¹⁹

515 PAUSANIAS, *Description of Greece* x: v.7, VOL IV, p395

516 GRAVES, *The Greek Myths*, p78

517 PLUTARCH, *Moralia* 386:3, VOL V, p207 – this wooden E was succeeded in turn by one of bronze, then gold (*cf.* flickering candle) – Plutarch concludes: “For the likelihood is that it was not by chance nor, as it were, by lot that this was *the only letter that came to occupy first place with the god* and attained the rank of a sacred offering and something worth seeing; but it is likely that those who, in the beginning, sought after knowledge of the god either discovered some peculiar and unusual potency in it or else used it as a *token* with reference to some other of the matters of the highest concern, and thus adopted it.” (emphasis added) [*Moralia* 385A, VOL V, p201]

518 “W.N. Bates, in the *American Journal of Archaeology*, XXIX. (1925) pp239–246, tries to show that the E had its origin in a Minoan character E... (as is shown by the evidence of a Cretan gem in the Metropolitan Museum of New York) and later transferred to Delphi. Since the character was not understood, it, like other things at Delphi, came to be associated with Apollo. This character has been found on the old omphalos [Ben stone] discovered in 1913 at Delphi in the temple of Apollo.” [BABBITT, *Plutarch* v, ‘The E at Delphi’ Introduction, p196]

519 “C. Fries, in *Rheinisches Museum für Philologie*, LXXIX. (1930) 343–344, offers as “*nodi explicatio*” the fact that in Sumerian inscriptions E means house or temple, and so may be connected with Babylonian ritual...” [BABBITT, *op cit*, p196]

The ϵ at Delphi *was* in fact a token, as Plutarch remarked, of the single intercalary day required to justify the variable-month 364-day calendar (initially configured in an 8-year ‘great year’ round comprising 100 months; later refined to 99 anticipating a solitary intercalary day every eighth year). A token *recollecting* the number ‘five’ because the new calendar was a great improvement over the earlier 360-day measure of the Sumerians and Egyptians, which required the addition of an *E-pact* of five intercalary days a year.

Yahweh – the *singular* deity whose root was the Sumerian number 5, *ia* – proves a parallel concentration of the same intercalary progression: the One God absorbing the need for an extended supplication to five gods on separate festal days. Yet Yahweh would not *reveal* himself before Moses abandoned Egypt – a period, as noted (p11, fn30), linked to the 19-year Metonic calendar (which was introduced into Greece in 432 BC).⁵²⁰ While the 8-year calendar which the ϵ at Delphi had been distilled from, was refined, according to scripture, by Abram (who added the eighth letter to his name at 99), the progenitor of Moses.

A NOTE that the ‘confusion’ of languages refers expressly to the introduction of a new calendrical measure whose terms took on a radical new meaning (thus confusing their application)

B NOTE further that Plutarch’s disclosure confirms that the ancient insights had in fact become obscured even among the temple priests

520 as noted (p33, fn97) Hebrew adoption of the 19-year calendar was standardized about 359 AD, while its introduction into Babylonia appears to have occurred during the Persian period: “The Persian kings, after the conquest of Babylon in 539, adopted the Babylonian calendar. In the reign of Artaxerxes II (c. 380) the court astronomers switched definitely to the 19-year cycle, which became standardized in 367: from now on, the month Addaru II [male month – cf, double-Adar; and Hades/Pluto] was intercalated in the years 3, 6, 8, 11, 14 and 19, and the month Ululu II [female] in the year 17 of every cycle.” [BICKERMAN, *Chronology of the Ancient World*, p24] NOTE further that: “The numerical relation between the length of lunar months and that of solar years could have been established as early as the seventh century. Yet, as late as the third quarter of the sixth century, and perhaps for a long time afterwards, official letters continued to inform the local officials that the current year

And the temple of Apollo at Stonehenge – to judge from Leto's birth in Britain (*cf.* p137, fn392) – appears older than its satellite temple at Delphi; the introduction of the Set measure of the variable-month calendar to Greece (with its concomitant mnemonic of the preliminary alphabet) importing the signal monogram of the 'five-in-one' Ε to Delphi directly from the plains of Wiltshire, where both measure and script were arguably conceived.⁵²¹

should be embolismic. On the other hand, cuneiform documents show that from c. 600 the intercalations followed certain norms. Between 611 and 387, that is for 224 years, we know of 78 leap-years. Since the quality of many years is still unknown, it is possible that the court astronomers followed the simple rule of 3 intercalations for each 8 years [*ie.* an 8-year 99-month calendar]. It is also possible that from the second part of the sixth century on [550 BC], they followed the schema of 7 intercalations for every 19 years, though the choice of intercalated years may have been decided from case to case." [BICKERMAN, *Chronology of the Ancient World*, p23] Thus the period of the establishment of the Ε at Delphi – arguably instituted on the single 'five-in-one' annual intercalation prescribed for the initial variable-month 364-day Set year – may be shown to have preceded the period of the correlative disclosure of the name of Yahweh to Moses (who, as I contend [p22], augured – in the symbolic progression of Hebrew patriarchal mnemonics – the 19-year Metonic cycle).

- 521 "Bœo, a native woman who composed a hymn for the Delphians, said that the oracle was established for the god by comers from the Hyperboreans [*cf.* p128, fn365], Olen [*cf.* Hellen] and others, and that he was the first to prophesy and the first to chant the hexameter oracles. The verses of Bœo are: —

Here in truth a mindful oracle was built

By the sons of the Hyperboreans, Pagasus and divine Agyieus."

[PAUSANIAS, *Description of Greece* x: v.7/8, VOL IV, pp393–5]

- A NOTE that a confederacy of Celts led by the enigmatic Boii, under Brennius (*cf.* Bran → Abram), invaded Greece in 279 BC with the singular intention of dispatching the Pythia – or so it appears from their removal after her death, to Anatolia where they settled the 'Hyperborean' colony of Galatea
- B NOTE further that the initial hexameter oracular measure may delineate an even earlier 'six-station' tradition (*cf.* p92, fn248E) instilled before the rise of the Set measure (Akkadian → Achæan) – the *omphalos* "a sacred stone, of a rounded conical shape, in the temple of Apollo at Delphi, fabled to mark *the central point of the earth*" (emphasis added) [OED VOL II, p1446]

THE TEMPLE OF SOLOMON – extensively damaged in the earthquake of 759 BC (*cf.* p96, fn259)⁵²² – needed repair again during the reign of Josiah of Judah (640–609 BC). This too may have been the result of cataclysm – not mere decay (as consensus maintains) – the period of the three great inundations about this time, according to Velikovsky, extending from 747 to 687 BC.

The temple was designed expressly to harbour the *name* of Yahweh⁵²³ – the letters *ia* signifying ‘five-in-one’ – just as its correlative secured the diphthong *ei* in the Ε at Delphi (fifth letter of the Greek alphabet). The unspeakable name of Yahweh – composed of *five* vowels in Greek: ΙΕΥΟΑ – was intoned but *once* a year, by the High Priest on the Day of Judgement (*cf.* p18, fn46) – the solitary intercalary day at the end of the improved 364-day variable-month year, which replaced the five intercalary days of the antecedent

522 repairs made to the temple in the reign of Joash (835–796 BC), eighth king of Judah, may – given the apparent ‘discrepancies’ in the variant chronologies of the kings – correspond with the damage sustained during the putative cataclysm of 759 BC:

“The masters of works having once made a start, the repairs went ahead under their supervision; they rebuilt the Temple of God to its former state and strengthened the fabric.”

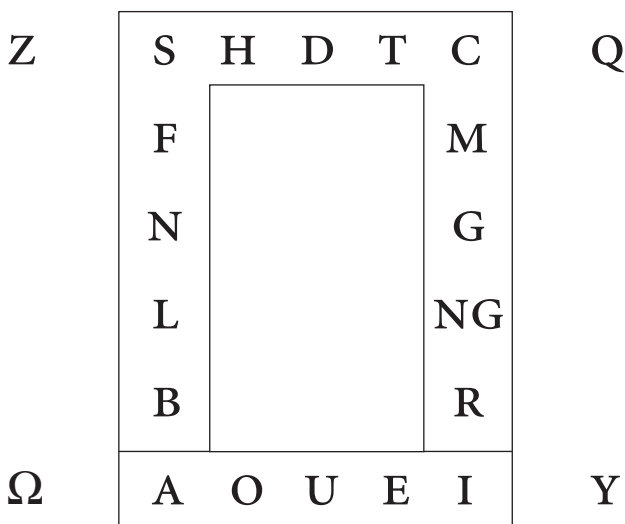
[II CHRONICLES XXIV: 13]

A NOTE that the temple is renewed in the *eighth* reign – the 8-year calendar of Judah, pointedly in opposition to the Bel (Baal) measure of Israel, together with the golden calf or Apis ‘great year’, and the 70-year Bakh ‘great year’ rounds (*cf.* “seventy sons of Ahab in Samaria” — II KINGS X: 1) throughout the interval of the kings; while Judæan converts to the Israelite observance – such as Manasseh and his son Amon – signal the return to *ancestral* Egyptian measures: Jeroboam the Ephraimite, who led the ten tribes in the schism against Judah, betraying Egyptian affinities both through his ancestry – Ephraim and namesake Manasseh, sons of Joseph, native to Egypt – and his exile; while Amon (whose namesake represents full moon in Egyptian iconography, which falls on day fifteen in the cycle), is the fifteenth king

B NOTE further that Benjamin (*cf.* p149, fn430; p152, fn444), Jacob’s other son with Rachel (and Joseph’s only full brother), alone aligns himself with Judah (David) – summoning the presentiment of a ‘house’ (temple) divided over Egyptian influence

523 “I consecrate this house you have built: I place my name there for ever...” [I KINGS IX: 3]

Egyptian Bel-measure year of 360 days. The name of god secreted in the sanctuary, invoked Yahweh on the one day the subterranean vowels of the Beth-Luis-Nion alphabet came into play in the plan of the Boibel-Loth calendar.⁵²⁴



A calendrical mnemonic ingeniously constructed to begin and end on the submerged letter A – which, as noted (*cf.* p245), figures the first night of the new lunation when no phase is visible in the sky (the moon apparently submerged in the underworld). A cyclical figure pivoting the divine epithet ‘*alpha* and *omega*’⁵²⁵ where *alpha* underscores the

⁵²⁴ Beth-Luis-Nion alphabet elaborated in a figurative ‘trilithon’ as the Boibel-Loth calendar, comprising 13 months of 28 days – the cornerstones as ‘resting-places’ configuring doubled counts (13 letters projecting 22): ss = z/cc = q/ii = y/aa = Ω (*omega* – larger o – signifying the completed cycle, where *omicron* or smaller o represents full moon) – while the vowels submerged beneath the ground were intoned together (five as one) on the terminal day of the year [GRAVES, *The White Goddess*, p270]

⁵²⁵ “[the] great voice from the Throne [declaring] I am the Alpha and the Omega, the Beginning and the End” [REVELATION XXI: 6]

initial dark night, and *omega*, the completed lunation on the terminal, or polar, dark night of the cycle. In other words, an *annual* circuit of 13 months, which further incorporates the *monthly* presentiment of two dark nights, configured to reside with the vowels in the underworld (representing the yearly day of increase, or sole intercalation of the 364-day calendar). It bears noting also that the seven subterranean vowels⁵²⁶ in the figure, *shadow* the seven focal phases of a lunation (cf, p92, fn248F) – seven aspects of the goddess as *mates* for the seven spectres.

“In the eighteenth year of King Josiah [622/1 BC], the king sent the secretary Shaphan...to the Temple of Yahweh. ‘Go to Hilkiah the high priest,’ he told him, ‘and tell him to melt down the silver that has been brought to the Temple of Yahweh and that those who guard the threshold have collected from the people. Let him hand it over to the masters of works attached to the Temple of Yahweh, for them to spend on the workmen working on the repairs to the Temple of Yahweh, on the carpenters, builders and masons, and on buying wood and dressed stone for the Temple repairs. But they are not to be asked to render account of the money handed over to them, since they are honest in their dealings.’ The high priest Hilkiah said to Shaphan the secretary, ‘I have found the Book of the Law in the Temple of Yahweh.’ And Hilkiah gave the

526 preserving an insight into the conception of the 7 Greek vowels; which originated, according to Gaius Julius Hyginus (ca 64 BC – 17 AD) curator of the Palatine Library, with the five introduced (together with two consonants – *beta* and *tau* – both signifying “bull”) by Mercury (Hermes) or the *Three Fates* (cf, *Hermes Trismegistus*) – *alpha*, *eta*, *iota*, *omicron*, *upsilon* – seven letters drawn from the flight of cranes (γερανός *crane*, cognate with κορώνη *corona*); the final two vowels – *epsilon* and *omega* – added (along with the consonants *zeta* and *phi*) by Simonides the Dionysian (cf, the doubled characters in the Boibel-Loth calendar), following the introduction of 13 further consonants (cf, the 13 months of the body of the calendar) by Palamedes and Epicharmus [cf, GRAVES, *The White Goddess*, p238] NOTE that the five initial vowels introduced by Hermes accord with the five underworld (or intercalary) days won by Thoth (Hermes) from the moon (*ie*, the seventy-second part of the day throughout the 360-day year: $360 \div 72 = 5$), substantiating their compression (ΙΕΥΟΑ → Yahweh) as the single intercalary day of the 364-day year: a name *unutterable* because the vowel sounds which comprised the initial secretion weren’t notated in Hebrew script

book to Shaphan, who read it. Shaphan the secretary went to the king and reported to him as follows, 'Your servants,' he said, 'have melted down the silver which was in the Temple and have handed it over to the masters of works attached to the Temple of Yahweh. Then Shaphan the secretary informed the king, 'Hilkiah the priest has given me a book'; and Shaphan read it aloud in the king's presence." [II KINGS XXII: 3–10]

The Book of the Law recovered from the temple is held by many to have been the book of *Deuteronomy* or "second law" – expanding the view that it presents a 'forgotten' redaction of the book of *Leviticus*.⁵²⁷ Others maintain that the 'lost' book was merely secreted during the preceding reigns of Manasseh (687–642 BC) and Amon (642–640) to prevent its destruction.⁵²⁸

Yet the possibility remains that the scroll retrieved from the ruins⁵²⁹ of the temple contained the ancient wisdom of the rebel Egyptian priests forced into hiding by Seti I and

527 "It is commonly accepted that this scroll was, or contained, the book of Deuteronomy, although this is not proven. This collection of ancient law, fanning the already burning feeling of nationalism, led to further political and religious reform. On the basis of this book, Josiah obliterated pagan worship (2 Ki. 23: 4–14), including the false priests (*kemarim*, Akk. *kumru*; 2 Ki. 23: 5) and the altar at Bethel (2 Ki. 23: 15; cf. 1 Ki. 13: 2). He and the people made a new covenant with Yahweh (2 Ki. 23: 1–3; 2 Ch. 34: 29–33) which would make this book the law of the land. He also celebrated the Passover in such a grand style as had not been seen since the days of Samuel (2 Ki. 23: 21–23; 2 Ch. 35: 1–19)." [New Bible Dictionary, p624] cf. *kumru* & Qumran (p136, fn387)

528 "The sacred Law of the Temple, included in Deuteronomy, which had been hidden or lost during the reign of Manasseh" [II KINGS XXII: 8 *fn*]

NOTE that the date of Manasseh's succession coincides with the last of Velikovsky's three cataclysms (747–687 BC)

529 the repair – requiring "carpenters, *builders* and masons" – called for "dressed stone" as well as "wood", suggesting something far greater than deterioration; nor do the alterations undertaken by Manasseh indicate *abandonment* leading to decay, or a need for anything more than their removal following the death of Amon: "[Manasseh] built altars in the Temple of Yahweh...[and] altars to the whole array of heaven in the two courts of the Temple of Yahweh...[and] placed the carved image of Asherah which he had made in the Temple" [II KINGS XXI: 4–7]

Rameses II; and that its recovery marked the introduction of the Biblical recension.

The greatest of the three putative cataclysms, according to Velikovsky, was that of 687 BC – devastation so extreme that survivors may have been displaced for as long as 60 years before securing both the will and means to restore their ancestral domain. Homes not only reduced to rubble, but a land so polluted that it repelled all resettlement for generations.⁵³⁰

Both the silver they had melted down to pay the workers and the faith in their honesty, conjure a communal undertaking, consistent with the reconstruction of a devastated community.

Manasseh's father Hezekiah⁵³¹ – who ruled over Judah for 29 years (716–687 BC) – fell mortally ill, only to be restored by Yahweh who rewarded Hezekiah's righteousness with an additional fifteen years of life.

530 *cf.* “The Pelasgians, after conquering a large and fertile region... were visited by divine wrath, and some of them were destroyed by calamities inflicted by the hand of Heaven.... The first cause of the desolation of their cities seemed to be a drought which laid waste the land, when neither any fruit remained on the trees till it was ripe, but dropped while still green, nor did such of the seed corn as sent up shoots and flowered stand for the usual period till the ear was ripe, nor did sufficient grass grow for the cattle; and of the waters some were no longer fit to drink, others shrank during the summer, and others were totally dried up. And like misfortunes attended the offspring both of the cattle and of women. For they were either abortive or died at birth, some by their death destroying also those that bore them; and if any got safely past the danger of their delivery, they were either maimed or defective or, being injured by some other accident, were not fit to be reared. The rest of the people, also, particularly those in the prime of life, were afflicted with many unusual diseases and uncommon deaths.... And there began to be disorderly emigrations, such as might well be expected from a people driven forth by a frenzy and madness inflicted by the hand of Heaven.” [DIONYSIUS OF HALICARNASSUS I. xxiii:1 – xxiv:3, VOL I, pp73–9]

531 “He put his trust in the god of Israel. No king of Judah after him could be compared with him – nor any of those before him. He was devoted to Yahweh...” [II KINGS XVIII: 5/6]

“‘Yahweh, the God of David your ancestor, says this: I have heard your prayer and seen your tears. I will cure you: in three days’ time you shall go up to the Temple of Yahweh. I will add fifteen years to your life.’...Hezekiah said to Isaiah, ‘What is the sign to tell me that Yahweh will cure me and that I shall be going up to the Temple of Yahweh in three days?’ ‘Here,’ Isaiah replied, ‘is the sign from Yahweh that he will do what he has said; would you like the shadow to go forward ten steps, or to go back ten steps?’ ‘It is easy for the shadow to lengthen ten steps,’ Hezekiah answered, ‘no, I would rather the shadow went back ten steps.’ The prophet Isaiah then called on Yahweh who made the shadow go back ten steps on the steps of Ahaz.” [II KINGS XX: 5, 8–11]

‘Going up to the temple in three days’ signifies the rise of waxing crescent on day three in the cycle; ‘fifteen years of added life’ advances the reign⁵³² to the full glory of the full moon (on day 15 of the cycle); and ‘the ten steps’ represent the ten intercalary days of the 100-month 8-year calendar observed by the ten Israelite tribes.

Ahaz, father of Hezekiah (736–715 BC) – like his grandson Manasseh – was an apostate “follow[ing] the example of the kings of Israel”.⁵³³ The ‘steps of Ahaz’ – interpreted by Josephus as “the stairs of the king’s palace [which] may have constituted a type of sun-dial”⁵³⁴ – plot the measure (10 days) Yahweh had to *subtract* from the (10-tribe) Israelite observance, to approach the Judæan counterpart⁵³⁵ (the ‘shadow’ being a reference to the underworld provenance of the intercalary interval – a ten-day wake attending the interment of 100 months, to converge with the sun).

532 the signal 29-year reign of Hezekiah was contrived (with the rest of the Judæan, and the Israelite, kinglist) to draw attention to the competing calendars of the variable-month of 29 and 30 days

533 II KINGS XVI: 3

NOTE that the apostasy of the earlier kings refers as well to the antecedent Egyptian measures – cf, the 70 sons of *Ahab* in Samaria (p175, fn522) – while the apostasy of cognate *Ahaz* has become focused on the ‘heresy’ of the 100-month 8-year calendar

534 *New Bible Dictionary*, p1145

535 the 99-month 8-year calendar requiring but a single intercalary day every cycle to bring it into line with the solar equivalent: 49 months of 29 days (1421) plus 50 months of 30 days (1500) producing a total of 2921 days every eight-year cycle – while eight solar cycles comprise 2921.9376 days (8×365.2422)

Twelve years after the death of King Josiah in 609 BC – whose ‘religious awakening’ on recovery of the Book of the Law from the temple 13 years earlier, had led to reforms which *effected* Judaism – the sanctuary securing the name of Yahweh, was desecrated by the Babylonian army under Nebuchadnezzar (r. 605–562 BC), and subsequently burnt eleven years later following the rebellion of Josiah’s third son – the last Judæan king,⁵³⁶ Zedekiah (587/6 BC).⁵³⁷

The Biblical recension of the surviving insights of the rebel Egyptian priests, presents the story of two calendars under siege by proponents of the ancestral Bel measure – the earlier 100-month 8-year calendar largely suppressed by the Assyrians (722 BC); and the revised 99-month variant assailed by the Chaldean dynasty of Babylonia (597–587 BC), following the competing offensive of prevailing 100-month

536 following the absorption of the kingdom of Israel by Sargon II and the Assyrians (722 BC), Baal worship was perpetuated *among the Judæans* in the correlative reign of Ahaz – four of the nine kings throughout the remaining years of the Judæan kingdom proving decided apostates: Ahaz (732–715); Manasseh (687–643); Amon (643–641); and Jehoiakim (609–597). Since two of the five others each reigned only briefly (Jehoahaz for 3 months; and his nephew Jehoiachin for 3 months 10 days), the opposition to Bel idolatry fell to the reverence of two indomitable exemplars – Hezekiah (716–687) & Josiah (640–609) – & Zedekiah (597–587). The apostatic reigns appear to have consumed close to half the Judæan era (65 years) following the fall of Israel (135 years).

537 “As the result of deportation and flight Judah was left, and remained, virtually empty. The land south of a line between Beth-zur and Hebron seems to have been detached from Judah in 597 BC; into it the Edomites gradually moved. As a result, this area was lost to Judah until its capture by John Hyrcanus after 129 BC and the forcible Judaizing of its population. The remainder was placed under the governor of Samaria and deliberately kept virtually empty; *there is no evidence for the infiltration of other peoples*. It may be presumed that Nebuchadnezzar intended to follow the normal Assyrian-Babylonian practice of bringing in settlers from other conquered areas (cf. 2 Ki. 17: 24), *but for some reason refrained*.” (emphasis added) [*New Bible Dictionary*, p630]

NOTE that the territory appears to have remained *repellent* – particularly presuming the proximity of opportunistic nomadic cultures

adherents – the Judæans undertaking to preserve a cryptic record of their insights, during the Babylonian captivity. Released from exile by Cyrus after the Persian conquest of Babylon (539 BC), many⁵³⁸ returned to Jerusalem to restore the temple, laying the foundation for the subsequent rise of Judaism.

Restoration was begun 13 months⁵³⁹ after their return – the precise interval in the wilderness before Moses was

538 “...the people of the province who returned from captivity and exile...with Zerubbabel, Jeshua, Nehemiah, Seraiah, Reelaiah, Nahamani, Mordecai, Bilshan, Mispar, Bigvai, Rehum and Baanah [12 ‘family heads’]...numbered 42,360 people,* not counting slaves and maidservants to the number of 7337. They also had 200 male and female singers. Their horses numbered 736, their mules 245, their camels 435 and their donkeys 6720. When they arrived at the Temple of Yahweh in Jerusalem, a certain number of heads of families made voluntary offerings for the Temple of God, for its rebuilding on the site. In accordance with their means they gave 61,000 gold drachmas, 5000 silver minas and 100 priestly robes to the sacred funds.” [EZRA 11: 1/2, 64–9]

A NOTE that this resource excluded the temple vessels returned by King Cyrus: “The inventory was as follows: 30 golden bowls for offerings; 1029 silver bowls for offerings; 30 golden bowls; 410 silver bowls; 1000 other vessels. In all, 5400 vessels of gold and silver.” [EZRA 1: 9–11]

B NOTE further that the inventory itemizing 2499 bowls curiously produces a total of 5400 vessels – a discrepancy of 2901

* *cf.* 10,000 originally deported to Babylon, of whom 7000 were identified as nobles and 1000 as smiths [II KINGS XXIV: 14–6]; or variously, 4600 in total: 3023 Judæans in the 7th year of King Nebuchadnezzar; 832 citizens of Jerusalem in his 18th year; and 745 Judæans in his 23rd year [JEREMIAH LII: 30] – which equals one-fifth of the number of Levites a month or older (23,000) enumerated in the second Mosaic census (*cf.* p23, fn63)

C NOTE that the sum of Judæans (3023 + 745) is divisible by 12 ($3768 \div 12 = 314$) and the number of citizens from Jerusalem is divisible by 13 ($832 \div 13 = 64$)

D NOTE further that the 5400 vessels exported to Babylon with the 4600 Judæans of the second inventory, produces a sum of 10,000 displaced entities (conforming with the first inventory)

539 “It was in the second month of the second year after their arrival at the Temple of God in Jerusalem that...[they] began the work; they appointed the Levites who were 20 years old or more to superintend the work on the Temple of Yahweh.” [EZRA III: 8]

commanded to undertake his initial census (*cf.* p5, fn2) – but an injunction lodged by neighbouring Samaritans⁵⁴⁰ compelled the Judæans to suspend all work for the next eighteen years. Resuming construction in “the second year of the reign of Darius king of Persia [520 BC]” the temple was ultimately completed “on the twenty-third day of the month of Adar...[in] the sixth year of the reign of King Darius [*fn.* 1 April 515 BC]”.⁵⁴¹

This corresponds with the founding by Pythagoras, of his celebrated school, the *Semicircle* at Samos, instituted on his return from a similar period of Babylonian – in his case, Persian-dominated – captivity, in 513 BC (*cf.* p223, fn15). Wood for the temple, moreover, was requisitioned from his home town⁵⁴² – further bracketing the most seminal cultural institutions of the millennium (each enshrining a covert curriculum of Number). But the salient association remains the common impression that both the Second Temple and the *Semicircle* of Pythagoras appear to have been ‘resurrected’ alike on the remains of a fragmented antecedent culture arguably devastated by cataclysm (and the concomitant incursion of opportunistic forces).

As noted, his quest to recollect the ancient insights – which commenced when he was 18 (echoing the interval impeding the construction of the temple) – took Pythagoras from Samos to Miletus, Leros, Sidon, Carmel, Egypt and Babylon (the focal centres of learning affording access to texts destroyed in the devastation back home). His return to

540 the interfering Samaritans, however – assuming reverence for the god of the Judæans – maintained that “we have sacrificed to him [*ie.* the Judæan calendar] since the time of Esarhaddon king of Assyria [681–669 BC], who brought us here” [EZRA IV: 2]

541 EZRA IV: 24; VI: 15

NOTE that the *ten* lampstands of Solomon were replaced by a *seven*-branched candelabrum [*New Bible Dictionary*, p1170] – the ten-day intercalation of the 100-month 8-year calendar hardly germane for the adherents of the 99-month refinement, the *menorah* (*men-horæ* = “moon-dancers”) symbolizing the seven focal spectres of the lunar cycle (*cf.* p92, fn248F)

542 “...to the Sidonians and Tyrians they gave food, drink and oil, so that they would bring cedar wood from Lebanon by sea to Jaffa...” [EZRA III: 7]

Samos at 56 – recalling the earlier ‘departure’ of Narâm-Sin from Babylon, whose reign extended 56 years – signalling a restored connection with the ancestral preserves (which had been initially established with the introduction of the 56-year nodal regression or lunar course round).

Yet like the Bible and Judaism, the texts of the Classical Age departed from the iconography of the antecedent era, almost as if the ancestral accounts had grown opaque – the gods of Homer unidentifiable as calendrical mnemonics, just as the pantheon of Egypt had become gratuitous to the Jews. Under perpetual threat from adjacent Bel forces, the Judæans were compelled to secrete their insights and expansions of the Chosen Measure, on their return, in dry genealogies; where the Greeks – at a safer remove from the Egyptian armies – were relieved of the need for deception, freeing them to focus on more openly rational investigations of their condition.

After several generations, however, communities pivotal enough to be rebuilt, still faced the problem of recollecting the ancestral rites and observances largely from memory (presuming the loss to the cataclysms, of sacred archives). Thus in an age of increasingly conflicting memories, the need grew for missions to distant temple centres in hopes of recovering insights into these enigmatic recollections.

Pythagoras – who was duly “initiated in all the mysteries of Byblus and Tyre” after debarking at Sidon, where he “conversed with the prophets...[and] Phœnician hierophants” – undertook his mission, according to Iamblichus, not “for the sake of superstition...but...from an anxiety that nothing might escape his observation which deserved to be learnt in the arcana or mysteries of the Gods.” And the mysteries involved, Iamblichus adds, “were derived like a colony and a progeny from the sacred rites in Egypt”.⁵⁴³ He retreated to the temple at Carmel – “more sacred than other mountains, and inaccessible to the vulgar” – where, “separated from all society” he appears to have spent the better part of four years in Syria gaining instruction.⁵⁴⁴

543 IAMBlichus, *Life of Pythagoras* B, p7

544 IAMBlichus, *op cit*, pp7/8 – Syria: Sûr = Tyre (cf, p118, fn330)

Yet on his return to Samos at 56, Pythagoras discovered that the prevailing sensibility of rationalism precluded the dissemination of his *symbolic* insights among the general populace.⁵⁴⁵ During the subsequent eight years, therefore, he relocated to Delos, Crete and Sparta, before ensconcing his colony of 600 *Cænobitæ* – known as *Homacoïon*, the principal port of the newly-established province of *Magna Græcia* – within “the noblest city in Italy”, Crotona.⁵⁴⁶

“Celebrated as the *long-haired Samian*”⁵⁴⁷ he is credited with bringing “*completion* to the science of the celestial orbs, and unfold[ing] the whole of it by arithmetical and geo-

545 “On his return to Samos, however, being known by some of the more aged inhabitants, he was not less admired than before. For he appeared to them to be more beautiful and wise, and to possess a divine gracefulness in a more eminent degree. Hence, he was publicly called upon by his country to benefit all men, by imparting to them what he knew. Nor was he averse to this request, but endeavoured to introduce *the symbolical mode of teaching*, in a way perfectly similar to *the documents by which he had been instructed in Egypt*; though the Samians did not very much admit this mode of tuition, and did not adhere to him with that according aptitude which was requisite. Though no one therefore attended to him, and no one was genuinely desirous of those disciplines which he endeavoured by all means to introduce among the Greeks, yet he neither despised nor neglected Samos, because it was his country, and therefore wished to give his fellow-citizens a taste of *the sweetness of the mathematical disciplines*.” (emphasis added) [IAMBLICHUS, *Life of Pythagoras* B, p10]

NOTE that the “symbolical mode” referred to is a mathematical explication of the ancient texts or ‘myths’ (divined, like the Bible, with the paradigm of lunar mechanics in mind)

546 IAMBLICHUS, *op cit*, p13 (600 = Narâm-Sin; cf, p149, fn430)

547 IAMBLICHUS, *op cit*, pp5/14

A NOTE the consonance with Samson the *Danite*, last in the line of *fifteen* Judges (cf, full moon on day 15 in the cycle) presiding over Israël before the establishment of the kingdoms – whose long hair symbolized his strength: *ie*, given that hair is equated with the ‘branches’ or courses of lunar cycle (cf, p130, fn370; p147, fn419), long hair proves signal to the long measure of the 56-year course round of Narâm-Sin’s ‘great year’ – as κομητᾶι (*kometæ*) “long-haired”, characterizes the appearance every ‘great year’ of the comet [MANILIUS, *Astronomica* 1: 835, p70]

B NOTE further the cognation of *Samson* and *Samos* (cf, *Samaria*)

metrical demonstrations”.⁵⁴⁸ Yet the Pythagorean triangle, familiar to countless generations of geometry students,⁵⁴⁹ initially protracted something beyond a geometrical figure – the geographical configuration of the sacred outposts of Samos (where Pythagoras grew up), Same on Kephallenia (where the colony departing for Samos had convened) and Samothrace (seat of the Kabeiroi, over which his Thracian disciple Zalmoxis presided).⁵⁵⁰

The ‘triangle inscribed in the circle’, as noted (p111, fn305), projects a rectangle (assymmetrically across the diameter) whose vertices at Stonehenge form the station stones – the key sighting-lines to perpendicular readings, which drove its architects to erect their megalithic observatory on the plains of Wiltshire. And this triangle, according to legend, was engendered by Samothēs – the giant responsible for the conception of the alphabet (*cf.* p174, fn521).⁵⁵¹

548 IAMBLICHUS, *Life of Pythagoras* B, p12 (emphasis added)

549 “Like everybody else in the Belt [an area between the tropics and the north, from the Mediterranean to the Pacific Ocean, where the Great Agricultural Revolution was concentrated], they [the proto-Indians] knew Pythagoras’ Theorem long before Pythagoras was born...” [BECKMANN, *A History of Pi*, p26]

550 “The Getæ [the tribe at the mouth of the Ister or Danube River; *cf.* Goth] think that they do not really die, but when they depart this life they go to Zalmoxis, who is called also Gebeleizis [Gebel = Byblos, where the body of Osiris was recovered by Isis (*cf.* p85); thus connecting him both with the Set / Dan measure and lunar regeneration] by some among them....I am told by the Greeks who dwell on the shores of the Hellespont and the Pontus, that this Zalmoxis was in reality a man, that he lived at Samos, and while there was the slave of Pythagoras son of Mnesarchus. After obtaining his freedom he grew rich, and leaving Samos, returned to his own country.” [RAWLINSON, *The History of Herodotus* IV: 93/4, VOL 1, pp324/5]

A NOTE that the *servitude* of Zalmoxis, in one respect, projects the function of the Levitical priest in the temple – his name pointedly combining those of Saul and Moses with an overtone of Solomon (whose temple, like the Second Temple completed in 515 BC, relied on support from Byblian relations)

B NOTE further that the Akkadian dynasty of Sargon and Narâm-Sin was ultimately overthrown by Guti [*cf.* Getæ] barbarians

551 “...Samothēs – after whom Britain had its earliest name *Samothēa* – is credited by the Babylonian Berossus, with the invention of

Which returns us to the giant chalk figure on the hillside at Cerne Abbas, Dorset (*cf.* p159, fn468), whose eight ribs identify it with the 8-year ‘great year’ cycle.⁵⁵² Significantly, in this respect, many of his followers regarded Pythagoras as the *Hyperborean* Apollo.⁵⁵³ While both his name and that of the city in which he settled (Crotona) translate as “mouth of the serpent” – alluding to the serpentine track

letters, astronomy and other sciences usually attributed to the White Goddess...” [GRAVES, *The White Goddess*, p256]

A NOTE the resonance of *Samothea* with *Amathaon* ap Don [*cf.* Dan], the Welsh god “who stole a dog [*cf.* *cynic*, as the Greek term for the ‘great year’ – p90, fn245] from Arawn [Aaron] (‘eloquence’) King of Annwm (‘Tartarus’) and was by its means enabled to guess the secret name of the god Bran [ΙΕΥΟΑ]” [GRAVES, *The Greek Myths*, p393]

B NOTE also the consonance between *Samothes* and *Amenôthes* – as early Egyptologists such as Gaston Maspero, Flinders Petrie and Theodore Davis rendered the title Amenhotep, by which Akhenaton (like his father before him), was originally known [DAVIS, *The Tomb of Iouiya and Touiyou*, pp xiii, xvii]

552 the giant as a symbol of ‘great year’ measure in ancient myth, likewise enlightening the calendrical filaments of Anax (*cf.* Enoch, Enki), Asterius, Gyges, the Nephilim, Goliath, Melkarth (Tyrian Heracles), Gogmagog, Samothēs *et al*

A NOTE that the rib of Adam represents the lunar phase from the shorter male month, relinquished to the female (*cf.* p254); while the battle between Corineus and 12-foot (lunisolar) Gogmagog, resulting in his three broken ribs – “two on the right side and one on the left” (*ie.* after two nights with no ‘rib’ in the sky, one finally appears, oriented in the opposite direction) [GEOFFREY OF MONMOUTH, *The History of the Kings of Britain*, p54] – sustains the *phase* aspect of the ‘mortal’ rib (where the rib of the ‘giant’ signifies the *annual* element in the extended ‘great year’)

B NOTE further that the destruction of Gog of Magog prophesied by Ezekiel, is characterized as a *sacrifice* of ‘heroes’ and ‘princes’ who “are all rams and lambs, goats and fat bulls of Bashan” – signifying the displacement of the Akkadian-Egyptian ‘great year’ figures (rams and bulls) with the 8-year ‘great year’ of Yahweh, portending a singular sacrifice [EZEKIEL XXXIX:18]

553 “Such also was their reverence for Pythagoras, that they numbered him with the Gods, as a certain beneficent and most philanthropic dæmon. And some indeed celebrated him as the Pythian [Greek], but others as the Hyperborean Apollo.” [IAMBLICHUS, *Life of Pythagoras* B, p14]

of the moon's *course* through an extended 18.6-year 'great year' (or *giant*) cycle, whose pronounced slither back and forth along the horizon (*cf.* p250) provoked the pursuit of the lunar priests which led to the erection of Stonehenge (temple of Apollo on what would come to be known as the sacred isle of Avollon – fabled Samothea).⁵⁵⁴

DANIEL, THE BIBLICAL PARAGON of Dan superiority, was – after Isaiah, Jeremiah and Ezekiel – the last, and most apocalyptic⁵⁵⁵ of the four so-called major prophets, yet his 'life' is almost entirely drawn from the biographical details preserved in the *Book of Daniel*. Authorities disagree widely

- 554 also known as Hyperborea ("extreme north") and Albion, the white isle (*alba*), both for the chalk cliffs encountered on approach from the south, and as the birthplace of Leto, mother of Apollo (*cf.* p137, fn392) – "the daughter of the Titans Phœbe ('moon') and Coeus ('intelligence')" [GRAVES, *The Greek Myths*, p57]; *ie*, the offspring of 'lunar insight' – her birthplace Albion, thereby, conspicuously the lair or nursery of the moon
- A NOTE that Graves projects cognation with *lithos* "stone" [*op cit*, p768] and while the conventional derivation from *lethe* would make *Leto* "forgetful" (arguably summoning the prospect of the long measure of the 'great year' which might never have been memorialized without the *stone* circle of Stonehenge), the Latin cognate *letum* (from which, *lethal*) – signifying "death" – returns us to the underworld (her lair) and the injunction of jealous Hera who enlisted the Python to ensure that Leto would never give birth (to Artemis and Apollo) "in any place where the sun shone...namely underground" [GRAVES, *op cit*, p55/7]
- B NOTE also that Leto's Egyptian and Italian counterparts – *Lat* and *Latona* – suggest that Latinus son of Faunus (son of Picus son of Saturnus – clearly a scion of the variable-month Set-measure) may trace his lineage back to Leto's cradle as well: the 8-year 'great year' nurtured on insights patiently milked (*lait*) from the extended lunar cycle (or herd) at Stonehenge (recalling the Sumerian rulers who distinguished themselves as "nourished by the trustworthy milk of Ninhursag [mother-goddess]" [KRAMER, *History Begins at Sumer*, p99] – the 'milk' of lunar reflection a natural expression of moonlight)
- C NOTE further that Albion – lair of the White Goddess (*alba* = *luna*) – implicitly appears to have fostered the birth of *alpha* and the serial mnemonic of lunar figures forming the alphabet
- 555 "Within the Canon apocalyptic is represented especially by the books of Daniel and Revelation..." [*New Bible Dictionary*, p54]

over its date of composition, supporting either the period in which Daniel is reputed to have lived (6th century BC), or the second century BC during the Maccabean revolt⁵⁵⁶ – the latter date according with the rise of the apocalyptic movement,⁵⁵⁷ which arguably witnessed the production of such related works as the books of *Enoch*⁵⁵⁸ and *Jubilees*.⁵⁵⁹

556 “Modern critical scholarship is practically unanimous in its rejection of the book as a 6th-century BC document written by Daniel, in spite of the testimony of the book itself and the statement of our Lord that the ‘desolating sacrilege’ was ‘spoken of by the prophet Daniel’ (Mt. 24: 15). Critics claim that the book was compiled by an unknown author about 165 BC, because it contains prophecies of post-Babylonian kings and wars which supposedly become increasingly accurate as they approach that date (11: 2–35). It is further claimed that the book was written to encourage faithful Jews in their conflict with Antiochus Epiphanes (cf. 1 Macc. 2: 59–60) and that it was enthusiastically received by them as being genuine and authentic and was immediately put in the Hebrew Canon.” [New Bible Dictionary, p263]

557 “It was after the cessation of prophecy that apocalyptic flourished as a literature distinct from prophecy. Its first great flowering was in the mid-2nd-century [BC] crisis of Jewish faith under Antiochus Epiphanes, when apocalyptic was the literary vehicle of the Hasidic movement, which stood for national repentance, uncompromising opposition to hellenization and eschatological faith in God’s imminent intervention on behalf of his people.” [New Bible Dictionary, p54]

558 “Schürer holds, for example, that, with the exception of chapters xxxvii – lxxi (the ‘Parables’, or ‘Similitudes’), the entire book belongs to the period 130–100 BC; the ‘Parables’ he assigns to a time not earlier than Herod the Great. Beer thinks that the ‘Dream-Visions’ (chapters lxxxiii – xc) belong to the time of John Hyrcanus (135–105 BC), and he includes under the pre-Maccabæan portions only xci 12–17, xcii, xciii 1–14; and holds that the rest of the book was written before 64 BC. Dalman maintains that it cannot be proved that the important section xxxvii – lxxi (the ‘Similitudes’) is “the product of the pre-Christian period”, though he fully recognizes its Jewish character. Burkitt regards the writer as “almost contemporary” with the philosopher Posidonius (135–51 BC).” [CHARLES, *The Book of Enoch*, ‘Introduction’ by W. Cesterley, pp xiv/xv]

559 “The exact date of the composition of *Jubilees* cannot be fixed with absolute certainty, but no doubt, as Charles has argued,

Daniel, while yet a boy, was deported to Babylon, as the scripture reveals, “in the third year of the reign of Jehoiakim king of Judah [606 BC]”,⁵⁶⁰ where for three years – along with three other “royal or noble” scions of Judah⁵⁶¹ – he studied “the language and literature of the Chaldeans”⁵⁶² in preparation for a life of service in the palace of King Nebuchadnezzar.

“The king conversed with them, and among all the boys found none to equal Daniel, Hananiah, Mishael and Azariah. So they became members of the king’s court, and on whatever point of wisdom or information he might question them, he found them ten times better than all the magicians and enchanters in the entire kingdom. Daniel remained there until the first year of King Cyrus [539 BC].” [DANIEL 1: 19–21]

The 8-year 99-month Dan calendar proves 10 times better than its 100-month predecessor, in reducing the ten intercalary days per cycle, to a solitary day.

Nebuchadnezzar’s dream of a monstrous metallic statue comprised the first test of Daniel’s powers.

“You have had a vision, O king; this is what you saw: a statue, a great statue of extreme brightness, stood before you, terrible to see. The head of this statue was of fine gold, its chest and arms were of silver, its belly and thighs of bronze, its legs of iron, its feet part iron, part earthenware. While you were gazing, a stone broke away, untouched by any hand, and struck the statue, struck its feet of iron and earthenware and shattered them. And then, iron and earthenware, bronze, silver, gold all broke into small pieces as fine as chaff on the threshing floor in summer. The wind blew them away, leaving not a trace behind. And the

it falls some time within the reigns of Simon Maccabæus or John Hyrcanus, the flourishing period of the Hasmonean rule. This, at any rate, may be inferred from the historical sketch embodied in the apocalyptic passage, xxiii 12–31, and is reinforced by a number of other considerations. The date to which the various phenomena point is some time in the last half of the second century BC.” [CHARLES, *The Book of Jubilees*, ‘Introduction’ by G.H. Box, p33]

560 DANIEL 1: 1

561 DANIEL 1: 3 – Hananiah, Mishael and Azariah – who together with Daniel, were renamed by Ashpenaz (the presiding eunuch): Shadrach, Meshach, Abednego and Belteshazzar [DANIEL 1: 7]

562 DANIEL 1: 4

stone that had struck the statue grew into a great mountain, filling the whole earth.” [DANIEL II: 31–5]

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The hierarchy of seven terrestrial or subterranean ‘planets’ corresponding with their celestial counterparts, presents the key to its solution – (1) LEAD *Saturn*; (2) TIN *Jupiter*; (3) IRON *Mars*; (4) COPPER *Venus*; (5) MERCURY *Mercury*; (6) SILVER *Moon*; (7) GOLD *Sun* – the composition of the statue secreting the ordinal sum of 19.⁵⁶³

The succeeding chapter substantiates this interpretation with a golden statue “six cubits tall and three cubits wide” erected by Nebuchadnezzar to command the worship of his subjects – the product of its dimensions (18) presenting the *complement* of the earlier sum (19) in the antecedent 56-year ‘great year’ measure.

“King Nebuchadnezzar then summoned the satraps, prefects, governors, counselors, treasurers, judges, men of law, and all the provincial authorities to assemble and attend the dedication of the statue erected by King Nebuchadnezzar. Then the satraps prefects, governors, counselors, treasurers, judges, men of law, and all the provincial authorities assembled for the dedication of the statue erected by King Nebuchadnezzar; and they stood there in front of the statue which King Nebuchadnezzar had erected. The herald then made this proclamation: ‘Men of all peoples, nations, languages! This is required of you: the moment you hear the sound of horn, pipe, lyre, trigon, harp, bagpipe or any other instrument, you must prostrate yourselves and worship the golden statue erected by King Nebuchadnezzar. Those who do not prostrate themselves and worship shall immediately be thrown into the burning fiery furnace.’ And so, the instant the people heard the sound of horn, pipe, lyre, trigon, harp, bagpipe and all other instruments, the men of all peoples, nations and languages prostrated themselves and worshiped the statue erected by King Nebuchadnezzar.” [DANIEL III: 2–7]

563 gold head (7) + silver chest and arms (6) + bronze thighs and belly [‘digestion’ characterizing alloys]: tin [2] + copper [4] = $[6 \div 2] = (3) +$ iron legs and feet (3) = (19); the gilded statue representing ‘great year’ measure (*cf.* the Apis bull of Mycerinus, p98, fn265) – the 19-year fundament of the 56-year course round (*cf.* p167, fn492B) shattered by the improved calendar *mounted* on ‘a single stone’ (the sole intercalary day of the superior 8-year 99-month Dan measure); the statue’s feet part clay to convey fragility and instability, part iron to imply decay over time

The eight classes of subjects and seven types of instrument – *emphasized* through repetition – compound to produce the signal product of Babylonian worship ($8 \times 7 = 56$): the pervasive 56-year ‘great-year’ course round of Narâm-Sin prevailing – over “all peoples, nations and languages” – at the time of Daniel’s captivity.⁵⁶⁴

Hananiah, Mishael and Azariah, refusing to prostrate themselves before the abomination of Nebuchadnezzar, were bound and thrown into the furnace, yet the flames – “seven times hotter than usual”⁵⁶⁵ – would not consume them (the ferocity of the fire attributable to the 56 suns or years of the lunar course round). Their god – the solitary intercalary day – had preserved them from “the underworld...the hand of death...the burning fiery furnace”⁵⁶⁶ where other gods had failed to keep *their* measures secure from the ‘intense heat’ of much longer ‘great years’.⁵⁶⁷

Nebuchadnezzar’s second dream involved a majestic tree visible “from the ends of the earth”⁵⁶⁸ – a “Holy One” or “watcher” (*cf.* p241) descending from heaven to command that all but “stump and roots” be cut down, “a beast’s heart given him, and seven times pass over him”.⁵⁶⁹ The stump and roots salvaging the truncated 8-year pediment of the

564 *Daniel* (a mere lad when deported) clearly the personification of the diviners of the comparably young 8-year *Dan* measure

565 DANIEL III: 19 – the 56-year round being 7 times longer than its 8-year *Dan* counterpart

566 DANIEL III: 88

567 requiring *adjustment* after the ‘consumption’ of a portion of the lunar cycle by the solar – the 56-year round, for instance, losing 62.05 days (employing a solar cycle of 365 days) to the compound of 690 lunations (*cf.* p247); where the 8-year *Dan* calendar ‘burned’ but a single day every 99 months

568 DANIEL IV: 8 – the tree (symbolizing lunar cycle – *cf.* p28) representing the mighty course round of Narâm-Sin whose branches (courses) were visible from the *ends* of the earth (*ie*, the horizons against which lunar *courses* were staked – the phase cycle divined through observation of a stationary point of sky; where the course cycle requires attention to rising and falling positions, facilitated by sighting stones like the megaliths at Stonehenge)

569 DANIEL IV: 10–3

56-year 'great year' interval over which seven *times* would pass (each 8-year cycle protracting a *time*);⁵⁷⁰ the heart of the beast *pulsing* the lifeblood of 'great year' bulls and rams.

A thousand nobles attending the banquet of Belshazzar⁵⁷¹ raised their cups, "the gold and silver vessels...looted from the sanctuary in Jerusalem...[to] their gods of gold and silver, of bronze and iron, of wood and stone [when]...the fingers of a human hand appeared, and began to write on the plaster of the palace wall, directly behind the lamp-stand; and the king could see the hand as it wrote...*Mene, Mene, Tekel and Parsin*". Daniel, rendering the message for the king, claimed that it meant, "*Mene*: God has *measured* your sovereignty and put an end to it; *Tekel*: you have been *weighed* in the balance and found wanting; *Parsin*: your kingdom has been *divided* and given to the Medes and the *Persians*.... That same night the Chaldean king Belshazzar was murdered, and Darius the Mede received the kingdom, at the age of sixty-two".⁵⁷²

As noted (p192, fn567), the 56-year nodal regression round of 690 lunations requires the addition of 62 days to realize a convergence with 56 solar years *of 365 days* (the actual disparity extending another 16 days). In other words, at the 'age' of 62 *days*, a new cycle or reign may commence. While the gods of the Chaldeans (fashioned from six elements), are immediately succeeded in the narrative by a hand (of five fingers) inscribing a text composed of four words.⁵⁷³

570 $8 \times 7 = 56$

571 son of and co-regent with Nabonidus (556–539 BC), following the brief rules of Nergal-šar-Usur (560–556 BC) and Amel-Marduk (562–560 BC), son of Nebuchadnezzar (605–562 BC) [BICKERMAN, *Chronology of the Ancient World*, p157]

572 DANIEL V: 1–31 (emphasis transcribed)

NOTE that the figure of 1001 cups raised to the gods, projects a quotient of 143 'weeks' ($1001 \div 7$) or $2\frac{3}{4}$ 'years' ($52 + 52 + 39$)

573 Daniel's interpretation ignores the repetition of the first word, *Mene* signifying "moon" (while *Parsin* implies the "divided" or half-moon – cf, *Sin*, the Babylonian moon-god); yet the sum of two full measures (*Mene, Mene*), a half-measure (*Tekel* hefted in a balance split in two pans) and a quarter-measure (*Parsin*) equals $2\frac{3}{4}$ – conveniently according with the projected quotient of the preceding footnote [572]; NOTE in addition [over], that

“It pleased Darius to appoint 120 satraps over his kingdom for the various parts of the kingdom, and over them three presidents – of whom Daniel was one – to whom the satraps were to be responsible. This was to ensure that no harm should come to the king. This Daniel, by virtue of the marvellous spirit residing in him, was so evidently superior to the presidents and satraps that the king considered appointing him to rule the whole kingdom. The presidents and satraps in consequence started hunting for some affair of state by which they could discredit Daniel...”
[DANIEL VI: 2–5]

The ‘120 satraps’ summon the product of the ‘six elements, five fingers and four words’ ($6 \times 5 \times 4$), while their digressive sequence leads to the aggregate of the ‘three presidents’.

At wit’s end, “the presidents of the kingdom, the prefects, the satraps, counselors and governors” persuaded Darius to decree that “whoever within the next thirty days prays to anyone, god or man, other than to yourself, O king, is to be thrown into the lions’ den”.⁵⁷⁴ Figures which compose the measures of the Babylonian calendar: ‘120 satraps’ times ‘three presidents’ (360-day year); five groups of officials (5 intercalary days); “thirty days” (the standard Bel month).

- A “The literal meaning of the words is uncertain; possibly they are the names of weights or coins – *mina*, *shekel* and *para* (half a *mina*) have been suggested.” [DANIEL V: 24b]
- B NOTE too that the figure $2\frac{3}{4}$ may be elaborated as a lunar interval (the lampstand *behind which* the message appeared, presenting the established array of lunar ‘lamps’ in the Babylonian model): two full moons computing 60 days (in their standardized 30-day lunation); a half-moon computing 15 days (or half the measure of the full moon); with an added fraction or part-moon making up the difference to accord with the *actual* number of days lost to the 56-year measure (employing a solar year of 365.2422 days):
 $56 \times 365.2422 = 20,453.563$
 $690 \times 29.530588 = 20,376.105$
 $20,453.563 - 20,376.105 = 77.458$
 (rounded to 78 days – figuring a solar interval at 365.25 days – the portion demanded of *Parsin*, in this case: *three days*)
- C NOTE further that the retreating sequence of ‘elements, fingers and words’ ($6 \rightarrow 5 \rightarrow 4$) directs attention to the successive figure ‘3’ – expediently confirming the intended value of *Parsin* (echoed in Belshazzar’s reward to Daniel for explaining the message: his elevation to the “*third* rank in the kingdom” — DANIEL V: 29)

Daniel's salvation from the lions – like the redemption of Hananiah, Mishael and Azariah from the flames – proving the superiority of the 8-year 99-month calendar over the deficient Bel measures (which were allegorically consumed with his accusers, by the lions – the most rapacious of the 'great year' beasts).⁵⁷⁵

Hard on the heels of his great test, we are introduced to the first of Daniel's visions, which advances the topic of the beasts (in the lions' den), while appearing to hearken back to the earlier reign of Belshazzar.

"I have been seeing visions in the night. I saw that the four winds of heaven were stirring up the great sea; four great beasts emerged from the sea, each different from the other. The first was like a lion with eagle's wings; and as I looked its wings were torn off, and it was lifted from the ground and set standing on its feet like a man; and it was given a human heart. The second beast I saw was different, like a bear, raised up on one of its sides, with three ribs in its mouth, between its teeth. 'Up!' came the command. 'Eat quantities of flesh!' After this I looked, and saw another beast, like a leopard, and with four birds' wings on its flanks; it had four heads, and power was given to it. Next I saw another vision in the visions of the night: I saw a fourth beast, fearful,

575 DANIEL VI: 24 – the "eternal sovereignty" of the singular Judæan god [DANIEL III: 33; IV: 31; VI: 27] contrasting the relative stability of the single-intercalation cycle of the 99-month calendar with the more complex and irrational Bel measures (requiring both annual and 'great year' adjustments) *cf.* a typical commentary of Paracelsus (1493–1541) – all the more remarkable, for his belief in the value of astronomy "out of which Human Beings will obtain all the Magnalia of God and Nature"; not to mention his Hermetic leaning – "There will also be others, at this time, which are not the true servants of God, which are braggarts, liars and dishonest. They will lay all kinds of false charges against the righteous, then the King will sentence the righteous. The King will know in his heart that God will not abandon his servants. The King's sentence will not harm the servants of God, but God will deliver his servants from his sentence, and through this deliverance will rise the true knowledge and recognition of the true servants of God. Then, all the false prophets and all the false christians will be sentenced and rooted out and cast into the den of the hellish lions. They will be annihilated so that they can do no more harm." [PARACELSUS, *Prophecies of the Prophet Daniel*, pp55, 119/20]

terrifying, very strong; it had great iron teeth, and it ate, crushed and trampled underfoot what remained. It was different from the previous beasts and had ten horns." [DANIEL VII: 1-7]

His 'visions' – occurring, appropriately, at night – advance a progression of diverse calendrical figures: [A] the winged lion – conventionally equated with the Babylonian empire – introducing the teratological composite of the dominant raptor (celestial) and predator (terrestrial), symbolizing the 'consumption' of lunar phases both in the heavens and the underworld (the lion characteristically secreting its cubs in recessed dens), its comprehension transferring the rule of lunar decay to man; [B] the recumbent bear raised on its side, embodying the hibernal interval separating lunations (one side rising) – the three ribs in its teeth, like the order to consume 'flesh', signifying the three days eaten up by the moon's hibernation; [C] the leopard's spots as phases, the four wings raise the lunar quarters, each presided over by a dominant 'head' or phase (opposing half-moons and twin full moons); [D] the exceptionally "strong" beast sporting ten horns, which demolished everything that "remained" (*ie*, intercalary residue), presenting the preliminary 8-year 'great year' with its need of a 10-day adjustment each cycle.

"While I was looking at these horns, I saw another horn sprouting among them, a little one; three of the original horns were pulled out by the roots to make way for it; and in this horn I saw eyes like human eyes, and a mouth that was full of boasts."

[DANIEL VII: 8/9]

The little horn replacing the three original horns (leaving eight, to emphasize their common 8-year base) figures the sole intercalary day of the 99-month refinement.

"Thrones were set in place and one of great age took his seat. His robe was white as snow, the hair of his head as pure as wool. His throne was a blaze of flames, its wheels were a burning fire. A stream of fire poured out, issuing from his presence. A thousand thousand waited on him, ten thousand times ten thousand stood before him. A court was held and the books were opened. The great things the horn was saying were still ringing in my ears, and as I watched, the beast was killed, and its body destroyed and committed to the flames. The other beasts were deprived of their power, but received a lease of life for a season and a time."

I gazed into the visions of the night. And I saw, coming on the clouds of heaven, one like a son of man. He came to the one of great age and was led into his presence. On him was conferred sovereignty, glory and kingship, and men of all peoples, nations and languages became his servants. His sovereignty is an eternal sovereignty which shall never pass away, nor will his empire ever be destroyed.” [DANIEL VII: 10–4]

The death of the beast is the demise of *one* ‘great year’ or 8-year cycle; the power of the earlier beasts, eclipsed by the conception of the artificial variable-month of 29 or 30 days (attempts to produce a calendar according with the actual lunar cycle,⁵⁷⁶ proving formidable). Seeking an explanation, Daniel learns that:

“The fourth beast is to be a fourth kingdom on earth, different from all other kingdoms. It will devour the whole earth, trample it underfoot and crush it. As for the ten horns: from this kingdom will rise ten kings, and another after them; this one will be different from the previous ones and will bring down three kings; he is going to speak words against the Most High, and harass the saints of the Most High. He will consider changing seasons and the Law, and the saints will be put into his power for a time, two times, and a half a time. But a court will be held and his power will be stripped from him, consumed, and utterly destroyed. And sovereignty and kingship, and the splendors of all the kingdoms under heaven will be given to the people of the saints of the Most High. His sovereignty is an eternal sovereignty and every empire will serve and obey him.” [DANIEL VII: 23–7]

The 100-month 8-year calendar lagging too far behind the seasons and the Law (of holy days) after some 350 months, the sovereignty of the calendar falls to the rule of the Most High (the solitary intercalary day of the refined 99-month variant).⁵⁷⁷

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- 576 the winged lion, bear and winged leopard epitomizing the progression of insights into the actual *nature* of the lunation
- 577 cf, “...the great image of Dn.2 represents the Satan-dominated ‘kingdom of the world’ (Rev.11:15) in the form of Babylon, Medo-Persia, Greece and Rome, with Rome continuing in some form to the end of the age. This godless empire finally culminates in ten contemporaneous kings (2:41–44; cf. 7:24; Rev.17:12) who are destroyed by Christ at his second coming (2:45). Christ then establishes his kingdom on earth (cf. Mt 6:10; Rev.20:1–6), which becomes ‘a great mountain’ and fills the whole earth’ (2:35).” [*New Bible Dictionary*, p264]

Daniel's subsequent vision, of the ram and the goat (two years after the first) took him to Susa in the third year of Belshazzar.

"I saw a ram standing in front of the river. It had two horns; both were tall, but one taller than the other, and the one that rose the higher was the second. I saw the ram thrust westward, northward and southward. No animal could stand up to it, nothing could escape it. It did as it pleased and grew very powerful. This is what I observed: a he-goat came from the west, having covered the entire earth but without touching the ground, and between its eyes the goat had one majestic horn. It advanced toward the ram with the two horns, which I had seen standing in front of the river, and charged at it with all the fury of its might. I saw it reach the ram, and it was so enraged with the ram, it knocked it down, breaking both its horns, and the ram had not the strength to resist; it felled it to the ground and trampled it underfoot; no one was there to save the ram. Then the he-goat grew more powerful than ever, but at the height of its strength the great horn snapped, and in its place sprouted four majestic horns, pointing to the four winds of heaven. From one of these, the small one, sprang a horn which grew to great size toward south and east and toward the Land of Splendor [fn: Palestine]. It grew right up to the armies of heaven and flung armies and stars to the ground, and trampled them underfoot. It even challenged the power of that army's Prince; it abolished the perpetual sacrifice and overthrew the foundation of his sanctuary, and the army too; it put iniquity on the sacrifice and flung truth to the ground; the horn was active and successful." [DANIEL VIII: 3-12]

The ram is the 350-year Mendes 'great year' measure whose second horn – the 70-year Bakh solar round – was longer than its first (the 25-year Apis lunar cycle). The he-goat out of the west (Stonehenge) is the 8-year 'great year' calendar, whose single horn represents the radical fusion of solar and lunar cycles – by standardizing the length of the month to either 29 or 30 days. The snapping of its horn alludes to the ineffectuality of the initial 100-month version of the 8-year calendar – the four *majestic* replacement horns (one of them small), in accord with the 350-month *sovereignty* of the ten-horn beast of the preceding vision before its power was stripped from it.

The great horn which grew from the little horn (turning into the solitary intercalary day of the revised 99-month

version of the 8-year calendar) “abolished the perpetual sacrifice” of intercalary days required both annually and at the end of each ‘great year’ cycle – Gabriel informing Daniel cryptically, that “the vision shows the time of the End”.⁵⁷⁸

Subsumed in this vision is another concerning its length – the “perpetual sacrifice, disastrous iniquity, of sanctuary and army trampled underfoot [lasting] until 2300 evenings and mornings have gone by: then the sanctuary shall have its rights restored.... This explanation of the vision of the mornings and evenings is true, but you must keep the vision secret, for there are still many days to go”.⁵⁷⁹ At the end of the 56-year ‘great year’ round “there are still many days to go” – the 78-day disparity between 690 lunations and 56 solar cycles (cf, p194, fn573B), resounded in the sum ‘2300 days’ when broken into months.⁵⁸⁰

Meditating on Jeremiah’s revelation of the seventy years of exile in Babylon,⁵⁸¹ Daniel was again visited by the angel Gabriel, come to instruct him on the meaning of the term ‘covenant’.

“Seventy weeks are decreed for your people and your holy city, for putting an end to transgression, for placing the seals on sin, for expiating crime, for introducing everlasting integrity, for setting

578 DANIEL VIII: 17

579 DANIEL VIII: 13/4, 26

580 $2300 \div 29.5 = 77.966101$ – months transmuted to days both to “keep the vision secret” and emphasize the pivot of lunar computation in the 56-year extended nodal regression round

A NOTE that the sacrifice of intercalary days is characterized as “trampling underfoot” because the intercalary interval was conceived to reside (like the unrevealed moon between cycles) in the underworld – dead days in company with departed heroes

B NOTE further that the need for mortal sacrifice to propitiate ‘the gods of lost time’ during feast days, was arguably relieved with the refinement of the 99-month 8-year calendar – sacrifice, after the reforms of Josiah, restricted to the Temple at Jerusalem

581 cf, “...they [the Judæans] will stay in slavery among the nations for 70 years. (But when the 70 years are over, I will punish the king of Babylon and that nation – it is Yahweh who speaks – for the wrong they have done...)” [JEREMIAH XXV: 11/2]; also: “I will punish Bel in Babylon and take from his mouth what he has swallowed.” [JEREMIAH LI: 44]

the seal on vision and on prophecy, for anointing the Holy of Holies. Know this, then, and understand: from the time this message went out: 'Return and rebuild Jerusalem' to the coming of an anointed Prince, seven weeks and sixty-two weeks, with squares and ramparts restored and rebuilt, but in a time of trouble. And after the sixty-two weeks an anointed one will be cut off – and... [sic] will not be for him – the city and the sanctuary will be destroyed by a prince who will come. His end will come in catastrophe and, until the end, there will be war and all the devastation decreed. He will make a firm covenant with many for the space of a week; and for the space of one half week he will put a stop to sacrifice and oblation, and on the wing of the Temple will be the disastrous abomination until the end, until the doom assigned to the devastator." [DANIEL IX: 24–7]

The 70 years of the Bakh solar 'great year' and the 56-year nodal regression round (requiring 62 days grace), are both Bel measures. Prince succeeds king – the preceding 56-year round, concluding with the 62 days intercalated from the underworld,⁵⁸² giving rise to an equally deficient successor. Yet another abomination succeeds the Bel measures, in the guise of a liberator whose radical innovation requires the intercalation of 'a week and a half-week' (10 days), before it too ultimately succumbs to incongruity – the 100-month variant of the 8-year calendar.

Next, "in the third year of Cyrus king of Persia [536 BC] ...on the twenty-fourth day of the first month...[after] a three-week penance", Daniel was visited by another angel who claimed that "the prince of the kingdom of Persia had been resisting [him] for twenty-one days".⁵⁸³ This points to 'the measure of a lunation' (the *first* month): whose initial three days – emphasized both in the reference to the "third year", and the difference between the Persian "resistance"

582 the week originating in the seven *focal* spectres (cf. p92, fn248F), the term 'week' employed to denote intercalary *days*, hearkens back to the five children of Nut – Set, Osiris, Isis, Nephthys and Horus the Elder – to whom the five annual Egyptian intercalary days (the Epact) were dedicated: *ie*, 'days' of *The week*; the sum of *focal* or 'Weekly' spectres summoning underworld measures (thus the combination of "seven weeks and sixty-two weeks")
NOTE that the years of a 'great year' allegorically adopt the distinction of 'great year weeks'

583 DANIEL X: 1–4

and the twenty-fourth day of the month – saw the moon give no resistance to her angelic captors in the underworld, by staying out of the sky.

Five kings follow the prince of Persia (days 3 through 24 in a lunation): “the prince of Javan” (claiming day 25),⁵⁸⁴ “three more kings [who] *are going to rise* in Persia” (days 26 through 28), and “a fourth [who] will come and be richer than all the others” (day 29).⁵⁸⁵ Richer, because the terminal day in the variable-month calendar (Javan → Dan), also pre-sides over day 30 of the mean lunation (*cf.* Hades / Pluto).

An extended conflict comprising 8 episodes⁵⁸⁶ involving two forces, advances the narrative to ‘the time of the end’ – the opposing kingdoms characterizing the rising (south) and falling (north) ‘halves’ of the lunar cycle (*cf.* p65); the King of the North, the introductory waning phase, Set (in whose domain the variable phase occurs); and the King of the South (Amon),⁵⁸⁷ the Bel measures. The “wretch” of

584 DANIEL X: 20b

NOTE that the segment of a lunation embodied by the prince of Persia extends to the number of letters in the Greek alphabet

585 DANIEL XI: 2 (emphasis added) – *ploutos* signifying “wealth”

586 (I) King of the South [XI: 5]; (II) King of the North “one of his [the King of the South’s] princes” [XI: 5]; (A) their brief alliance – the daughter of the King of the South going to the King of the North [XI: 6]; (B) “a sprig from her roots” rising in place of the King of the South to invade and plunder the North, carrying their gods, statues, gold and silver plate back to Egypt [XI: 7/8]; (C) King of the North and his sons invade Egypt, the kingdom of the King of the South, who annihilates their army [XI: 9–12]; (D) King of the North taking “his stand in the Land of Splendor” or Palestine, defeats the King of the South [XI: 13–6]; (E) King of the North makes a treaty with the King of the South sending him “a woman’s daughter” [XI: 17]; (F) King of the North begins to attack the islands and “the strongholds in his own country” [XI: 18/9]; (G) King of the North is displaced by “a man who will send an extortioner to despoil the royal splendor” [XI: 20]; (H) “in his place there will rise a wretch: he will not be given royal honors, but will insinuate himself into them *in his own time* and gain possession of the kingdom by intrigue” [XI: 21]

587 “He [King of the North] will invade the Land of Splendor, and many will fall; but Edom, Moab, and what remain of the sons of Ammon will escape him.” [DANIEL XI: 41]

the eighth episode represents the initial 100-month 8-year calendar which would ultimately prove deficient.

“The two kings, seated at one table, hearts bent on evil, will tell their lies; but they will not have their way, for the appointed time is still to come.” [DANIEL XI: 27]

Two kings – the “wretch” of the deficient 8-year calendar, and the ruler of the Bel measures – preceding the measure of an “appointed” time.

“At that time [when the time comes for the End] Michael will stand up, the great prince who mounts guard over your people. There is going to be a time of great distress, unparalleled since nations first came into existence. When that time comes, your own people will be spared, all those whose names are found written in the Book. Of those who lie sleeping in the dust of the earth many will awake, some to everlasting life, some to shame and everlasting disgrace. The learned will shine as brightly as the vault of heaven, and those who have instructed many in virtue, as bright as stars for all eternity. But you, Daniel, must keep these words secret and the book sealed until the time of the End. Many will wander this way and that, and wickedness will go on increasing.” [DANIEL XII: 1–4]

The clause “those who lie sleeping in the dust of the earth” refers to the adherents of *extensive* intercalation (*not* the dead) – both the Bel, and 100-month 8-year calendars, in need of excessive adjustment, with the addition of *dead* or underworld days to make them work. By comparison, the “appointed” or Chosen time, requires but one.

“Then I, Daniel, looked on and saw two others standing, one on the near bank of the river, one on the other. One said to the man dressed in linen who was standing further up the stream, ‘How long until these wonders take place?’ I heard the man speak who was dressed in linen, standing further up the stream: he raised his right hand and his left to heaven and swore by him who lives for ever, ‘A time and two times, and half a time; and all these things are going to happen when he who crushes the power of the holy people meets his end.’ I listened but did not understand.” [DANIEL XII: 5–8]

The end of “he who crushes the power of the holy people” – both the wretch of the 100-month 8-year abomination and the priests of the Bel measures – pending the passage of 350 months (requiring an intercalation of 35 days, which

irrevocably advances the calendar an entire lunation). A sum which further echoes the 350-year Mendes ‘great year’ of the more complex Bel adjustment.

“Then I said, ‘My lord, what is to be the outcome?’ ‘Daniel,’ he said, ‘go away: these words are to remain secret and sealed until the time of the End. Many will be cleansed, made white and purged; the wicked will go on doing wrong; the wicked will never understand; the learned will understand. From the moment that the perpetual sacrifice is abolished and the disastrous abomination erected: 1290 days. Blessed is he who stands firm and attains 1335 days. But you, go away and rest; and you will rise for your share at the end of time.’” [DANIEL XII: 8–13]

The difference between 1335 and 1290 is 45. “A time and two times” portions the measure in thirds – or 15, applied to the difference. Fifteen 30-day months equal 450 days; thirty 29-day months, 870 days – their total, 1320 days (or half a 30-day month *shy* of 1335). While forty-five 29-day months total 1305 (or half a 30-day month *more* than 1290).⁵⁸⁸

Both numbers characterized by “a time and two times, and half a time” – though only one “stands firm” (congruent) with the projection. The 100-month 8-year calendar, in this respect – including a preponderance (88) of 29-day months (compared with only twelve 30-day months) – associating the figure ‘1290’ with *its* dominant month. A mathematical expedient illustrating the incongruity of the 100-month abomination.⁵⁸⁹ And Daniel (the Dan 99-month 8-year calendar) is commanded to “rest” – a single day – before *his* “rise...at the end of time”.

- 588 $15 \times 30 = 450$ (a time)
 $30 \times 29 = 870$ (two times)
 $.5 \times 30 = 15$ (half a time)
 $450 + 870 + 15 = 1335$ [a time and two times & half a time];
 $45 \times 29 = 1305$ (a time and two times)
 $1305 - 15 (.5 \times 30) = 1290$ [three times, & half a time *less*]
- 589 NOTE that $1290 + 1335$ also equals 2625 (or 30×87.5 which may be broken into $3\frac{1}{2}$ intervals of 25; resounding the co-efficient of the abominable Bel-measure 25-year lunar, or Apis, ‘great year’)
- A NOTE also that the 45-day interval (a 30-day month and a half), introduced by Akhnaton to entertain the Hyksos variable-month Set measure, gave rise to the 8-year 100-month year of eleven 29-day plus one-and-a-half 30-day months (which conjures the figure of the Twelve Tribes of Israel: $8 \times 1\frac{1}{2} = 12 = 11 + \frac{1}{2} + \frac{1}{2}$)

Michael, the archangel, is characterized as “the great prince who *mounts* guard over your people” because he presides over the spectres or visible phases of the lunation (the Dan 99-month calendar all but dismissing the need for ‘dead’ or underworld counts, presided over by his counterpart Gabriel – cf, p113, fn314). It bears noting further, that the daughter of the King of the South sent to the King of the North (p201, fn586A), refers to the transposition of one of the two nights without a moon in the sky at the beginning of the lunation, to the end of the cycle (presided over by the King of the North, or Set); as the daughter of “a woman” (*ishah* = Isis) returned to the King of the South (fn586E), connotes its restoration.

The concluding two chapters of *The Book of Daniel* are considered apocryphal: ‘Susanna daughter of Hilkiah’ (XIII); and ‘Bel and the Dragon’ (XIV).⁵⁹⁰ Yet they so effectively embody the epitome of the narrative, to suggest a far more integral origin. The allegory of Susanna – characterizing the twin full moons as two corrupt judges presiding over the cycle of the goddess – tolls the knell for the duplicitous Bel model, with Daniel (personifying the Dan measure of Yahweh’s singular refinement) passing sentence.⁵⁹¹ While the exposure of the idol of Bel⁵⁹² as a pure deception of the priests, advances his most unequivocal indictment – the

590 “These additions are examples of pious legendary embroidery of the Daniel story and date from about 100 BC.” [*New Bible Dictionary*, p57]

NOTE the recurrence of the signal appellation ‘Hilkiah’ tying Daniel’s revelations to the recovery of the Law at Jerusalem

591 each judge naming a different tree beneath which he claimed Susanna had lain with her concocted lover; summoning the spectre of the twin full moons ‘who’ – presiding over distinct halves of the lunar cycle – prove poorly situated to survey the phases (or leaves) depending from the other’s tree: in other-words, they both named their own ‘tree’

cf, ‘Dan’ as “judge” (p83, fn221); Samson the Danite as the fifteenth Judge (p185, fn547) – day 15 in the lunation ushering in the first full moon

592 DANIEL XIV: 7 – “clay inside” referring to the regular digestion of subterranean or intercalary days; “bronze outside”, its alloy of solar and lunar cycles

70 priests of Bel⁵⁹³ invoking the 70-year solar ‘great year’ of the Bakh measure. Nine regents presiding over the lunar cycle – Isis, Nephthys, Horus, Thoth, Amon, Ra, Set, Ptah and Osiris – were summarily dismissed by Yahweh the god of the solitary measure, conjured to rule the heavens with invariable fidelity and far less complication (securing the inviolability of the goddess for all eternity).⁵⁹⁴

It bears noting that the daily sacrifice of “twelve bushels of the finest flour, forty sheep and six measures of wine”⁵⁹⁵ presents a contemptuous comparison of the Bel and Dan measures: $12 \times 40 \times 6 = 2880$ (or eight 360-day Bel ‘years’ – a *poor* substitute for the Dan cycle – requiring the further sacrifice of 42 days⁵⁹⁶ to bring it into line with the seasons, where the 99-month calendar enlists but a day). This sum recurs in the succeeding episode, after Daniel ingeniously dispatches the dragon (with balls of pitch, fat and hair)⁵⁹⁷ and is thrown, in consequence, into the lion’s den – Daniel surviving the seven lions for six days.⁵⁹⁸ Thus the key *Book of Daniel* imperiously seals the demise of the Bel measure.

THE PRIEST-SCRIBE EZRA⁵⁹⁹ left Babylon for Jerusalem, with the Book of the Law (*cf.* Hilkiah), in the seventh year (458 BC) of the reign of Artaxerxes (465–424 BC). Scholars,

593 DANIEL XIV: 9

594 “His sovereignty is an eternal sovereignty which shall never pass away, nor will his empire ever be destroyed.” [DANIEL VII: 14] (*cf.* p195, fn575)

595 DANIEL XIV: 3

596 $8 \times 365.2422 = 2921.9376$ [$8 \times 365.25 = 2922$]

$8 \times 360 = 2880$

$2921.9376 - 2880 = 41.9376$ [$2922 - 2880 = 42$]

597 alluding to the *substance* of the Bel measure: ‘hair’ signifying lunar courses; ‘fat’, the excessive length of the Babylonian ‘great year’; and ‘pitch’, the numerous underworld measures required (the dragon – initially conceived to have abducted the moon in the underworld during the two nights of her disappearance – characterizing the lunar slither through its course cycle)

598 $7 \times 6 = 42$ [DANIEL XIV: 31/2]

599 “...son of Seraiah, sons [*sic*] of Azariah, son of Hilkiah, son of Shallum, son of Zadok, son of Ahitub, son of Amariah, son of Azariah, son of Meraioth, son of Zerahiah, son of Uzzi, son of

however, observe that this date introduces an incongruity into the historical sequence of events at Jerusalem.⁶⁰⁰

"A certain number of Israelites, priests, Levites, cantors, gate-keepers and oblates went up to Jerusalem in the seventh year of the reign of King Artaxerxes. He arrived in Jerusalem in the fifth month: it was the seventh year of the king's reign, for he had decided to depart from Babylon on the first day of the first month, and he arrived in Jerusalem on the first day of the fifth month; the kindly favor of his God was certainly with him."

[EZRA VII: 7-9]

The significance of the six declensions of attendants who accompanied Ezra to Jerusalem "in the seventh year", is to alert the observant reader to the implicit sequence of the seven focal spectres. Ezra's arrival "on the *first* day of the fifth month" alludes to the fifth focal phase (Set)⁶⁰¹ which presides through the seventh 'year' (*ie*, Osiris the seventh phase, perceived as 'Set degenerated' – or Set's *final* wane)

Bukki, son of Abishua, son of Phinehas, son of Eleazar, son of the chief priest Aaron..." (*ie*, the seventeenth generation from Aaron – the seventeenth phase of the mean lunation comprising the first waning phase, presided over in the Egyptian pantheon, by Set; a genealogy contrived to associate Ezra with the Set/Dan calendar whose variable-month alternates on the pivot of the last day of the waning, or Set, half of the cycle) [EZRA VII: 1-5]

600 "The chronological relationship between Nehemiah and Ezra is in doubt. While Nehemiah's dates seem quite certain, supported to some extent by the Elephantine papyri's references to Sanballat, his arch-enemy, the traditional view that put Ezra's ministry in Jerusalem before Nehemiah's, in 458 BC, is now largely discredited. The picture given of the more or less settled city in which Ezra worked reflects more the state of affairs after Nehemiah's administrative efforts than that obtaining before he had come. Again, Nehemiah's memoirs in respect of the abuses he found prevalent among the people contain no hint that Ezra had already called upon them to respect the Law he brought with him. For these and a number of other reasons, scholars today usually favour a date for the Scribe's visit as around 428 BC, immediately following Nehemiah's first period of governorship of twelve years ending in 433 BC (Neh 5:14)." [ALLEGRO, *The Chosen People*, pp61/2]

601 WAXING PHASES [1] *Horus* (crescent), [2] *Thoth* (half-moon), [3] *Amon* (first full moon), [4] *Ra* (second full moon);
WANING PHASES [5] *Set*, [6] *Ptah* (half), [7] *Osiris* (crescent)

of the king's (or lunar regent's) reign. The emphasis on Set reinforces the implication in Ezra's genealogy.

The rise of the scribe,⁶⁰² following the Babylonian Exile, substantiates the suspicion among certain scholars, that the compilation of the Bible may have been *initiated* during the fifth century BC. Yet the predilections of the scribe, it will be noted, appear to have extended far beyond mere proficiencies in reading and writing.

"The wisdom of the scribe depends on the opportunity of leisure; and he who has little business may become wise. How can he become wise who handles the plow, and who glories in the shaft of a goad, who drives oxen and is occupied with their work?... On the other hand he who devotes himself to the study of the law of the Most High will seek out the wisdom of all the ancients, and will be concerned with prophecies; he will preserve the discourse of notable men and penetrate the subtleties of parables; he will seek out the hidden meanings of proverbs and be at home with the obscurities of parables." [ECCLESIASTICUS, OR THE WISDOM OF JESUS THE SON OF SIRACH XXXVIII: 24/5 – XXXIX: 1–3, *The Apocrypha*, pp154/5]

He was preoccupied with "the wisdom of *all the ancients*", involving not only the decipherment of foreign scripture, but also the perpetuation of an ancient tradition.

The modern tradition of Biblical exegesis – as demonstrated throughout this work – has failed to "penetrate the subtleties of parables" no less than "the hidden meanings of proverbs". Scholars and followers alike maintain that the One God anointed a Chosen People to lead the way to the Eternal Kingdom; yet, as I have shown, scripture alludes time and again to the preference for a Chosen Measure requiring the 'sacrifice' of a single day every eight years – a

602 "From the day that Ezra climbed up on to a wooden platform in the city square before the Water Gate and intoned the 'book of the law of Moses' in Hebrew and Aramaic 'from early morning until midday' until the people wept (Neh 8:1–9), *Judaism became a religion of The Book*. This 'Law', probably the Pentateuch, or first five books of the Old Testament, was not merely a piece of legislative literature. It was a manifestation of God's will, to be venerated and adored as though it were Yahweh made manifest on earth." (emphasis added) [ALLEGRO, *The Chosen People*, p62]

solitary sacrifice propitiated (like the five intercalary days of the Egyptian calendar sacrificed to the five children of Nut) before the presentiment of a singular god. Those who observed the preferred measure naturally felt themselves nearer to god, because they had approached the mysteries of solar and lunar mechanics with greater insight than any before them. Their measure – requiring far less adjustment than every other means of keeping time – rendered them the Elect of the heavenly host or Elohim (a spectral term incorporating the seven focal phases of a model lunation).

The spectre of a Chosen People coalesced, according to many scholars,⁶⁰³ with the rise of the scribe and the return of some 42,360 exiles to Jerusalem.⁶⁰⁴ Nehemiah, as acting governor of Palestine, oversaw the erection of a defensive

603 “Here we have the core of the doctrine of the Chosen Race, whose working out in practical politics was to wreak such havoc among the nations of the world and to bring successive disasters upon the Jews themselves. The idea was formulated among the Babylonian exiles, although its elements were already embedded in tribal mythology and religion. From afar they manipulated events and people in the cradle of Jewish political ambitions, Judah, where their hero-king David had five centuries earlier by cunning and courage won domination of Palestine. Their servant in this endeavour was Nehemiah, and his first task was to implant into the minds of the Palestinian Jews, residents and repatriates, the idea that however lowly their present status and meagre their resources, Yahweh was working out through them his great purpose which would result in their taking their rightful place as head of the nations. The signs of this divine control might be seen all about them. Had they not rebuilt the city walls in record time against overwhelming odds? Even their enemies recognized in this endeavour the influence of some superhuman power and were afraid, ‘for they perceived that this work had been accomplished with the help of our god’ (Neh 6:16). The Jews themselves must recognize that their defeat at the hands of the Babylonians, their Exile, and the hardships they had borne on their return, were but necessary tribulations to temper the steel of their endurance for the mighty works to come. Their present situation was the culmination of a tribal history stretching back to ‘the affliction of our fathers in Egypt’ (9:9), and now was the time to make a new covenant with their god (v.38).” [ALLEGRO, *The Chosen People*, p62]

604 NEHEMIAH VII: 66

wall around the city, completed in just 52 days.⁶⁰⁵ A policy requiring one-in-ten Israelites to take up residence in the Holy City, was immediately instituted to restore the core of Judaism.⁶⁰⁶

The 52 'days' resound the interval of the lunisolar 'year' of 52 weeks, which amounts to 364 days (or the length of the initial 8-year-100-month year, requiring the addition of an intercalary day annually). The total intercalation of 10 days every 8 years was refined with the 99-month calendar, to a single intercalary day every cycle – the antecedent to the scriptural 'one-in-ten' anointed for residency at the 'walled' core of the superior measure.

In otherwords, the incongruity in the tenures of Ezra and Nehemiah is dissolved with the recognition that the tales of repatriated Israelites conceal the essential narrative of their preferred or chosen measure – the sanctity of the holy city of Jerusalem nurtured on lunar insight.⁶⁰⁷ The rebellious priests who had fled Egypt with the new variable-month Set / Dan measure, clearly settled on Jerusalem as a centre of their observance, yet the chosen measure of the 8-year 99-month calendar had been in use by the Greeks, as noted (p173, fn520),⁶⁰⁸ long before the return of the exiles. The

605 "The wall was finished within fifty-two days, on the twenty-fifth of Elul [*fn*, October 445]." [NEHEMIAH VI: 15]

606 "Then the leaders of the people settled in Jerusalem. The rest of the people drew lots: one man in ten was to come and live in Jerusalem, the holy city, while the remaining nine were to stay in their towns. And the people blessed all those who volunteered to live in Jerusalem." [NEHEMIAH XI: 1/2]
NOTE that John Allegro (espousing the conventional view), holds that this policy was instituted to "swell their numbers for defensive purposes" – an interpretation which led him to surmise: "Just how reluctantly they went may be judged by the remark that those who volunteered to go were "blessed" by everyone else (11: 2)." [ALLEGRO, *The Chosen People*, p59]

607 *Jerusalem* arguably cognate with Hebrew *yereah*, "moon", and *Yerah*, Semitic moon-god

608 *cf*, STEEL: "In the centuries around 700–800 BC, the learned Greeks had adopted a cycle known as the *octaeteris*" (p13, fn34); *also*, LEY: "Beginning in 530 BC [the Chaldeans] used the 8-year period..." (p31, fn92) – *ie*, shortly after the first return of exiles

difference between the Isrælite and Greek 8-year measures is confined to the elaboration of respective 'deities': the Most High or One God of the Chosen Measure of the Isrælites, alluding to the single intercalary day on which the sacred cycle turned; while the pantheon of the Greeks adapted the focal phases of the Egyptian Bel-measure – the seven focal spectres or lamps (*cf.* p92, fn248F).⁶⁰⁹

It appears, moreover, that as Nehemiah and Ezra were in the service of Artaxerxes (465–424 BC) at Jerusalem, Meton of Athens was introducing a calendar of greater accuracy than the Chosen Measure (432 BC), extrapolated from the recently discovered 19-year lunar phase cycle.⁶¹⁰ Hebrew adoption of this 19-year calendar, as noted (p33, fn97), had to wait another 791 years until 359 AD and the tenure of Hillel II (303–65 AD) – though it displaced the measures of the Persians at Babylon (367 BC) and the Seleucids in Syria (312 BC) shortly after its introduction to Greece (*cf.* pp32/3, fn96; p173, fn520). Which suggests that the sacred scripture

609 a pantheon familiar to Homer

610 arguably divined by Egyptian priests after 1767 years of sustained observation within the pyramids of Giza, sometime during the preceding century; presumably after the visits of Thales and Solon (*ca* 615 BC) and before that of Herodotus (455 BC); pointing to the sojourn of Pythagoras (547–525 BC), who may conceivably have been present on the momentous night (of the solstice or equinox) when the waxing half-moon of Thoth appeared at long last down the sighting passage of the pyramid of Khafre (*cf.* p102) for the first time in 1767 years
 A NOTE that this would extend the date of erection of the Giza pyramids to sometime immediately prior to 2314–2292 BC – according roughly with the Akkadian era of Sargon and Narâm-Sin, 2334–2173 BC (*cf.* p103)

B “As to the actual dates of construction of the Great Pyramid, apart from the statement that it was built 300 years before the Flood, the legends add little. Egyptologists who worked out that the Fourth Dynasty [of Sneferu, Cheops, Didoufri, Kephren and Mycerinus] must have reigned between 2720 and 2560 BC believe that the Great Pyramid was commenced in 2644; others believe that its construction was begun in 2200 and that 30 to 56 years were required to complete it. Still others place the building of the Pyramid 1000 years earlier.” [TOMPKINS, *Secrets of the Great Pyramid*, pp219/20]

of the Hebrews may have bound them inflexibly to their moribund measure for some time after the establishment of the Metonic calendar (until the secretion of the figures of the Mosaic Exodus⁶¹¹ sanctioned its adoption). Which further suggests that the Mosaic narrative may have been introduced even later than the revisionists contend.⁶¹²

611 ‘430 years in Egypt’ added to ‘40 years in the wilderness’ totalling 470 years in exile – resounding the 235 lunations of the 19-year cycle when divided by 2 (invited by the two localities of the combined sum)

612 “The Yahwist’s history, which includes the primeval history, the patriarchs, and the life of Moses, was the work of an ancient Israelite (or more specifically, Judæan) scholar living among the exiles in Babylonia. He was well versed in the written wisdom, prophetic, and historical traditions that were available at that time [primarily *Deuteronomy* or the Book of the Law recovered from the ruins of the Temple at Jerusalem in 621 BC by the High Priest Hilkiah – cf, p177], and he in turn had a major impact on the work of Second Isaiah [fn: “Since I believe they were contemporaries...”]. He was influenced by the Babylonian environment, both by absorbing some of their antiquarian traditions and also by responding to the broader cosmopolitan horizon of the Babylonian empire. His work, fashioned as prologue and expansion of the Deuteronomic national tradition, significantly modified the Deuteronomic viewpoint, especially in the latter’s restrictive nationalism. The Yahwist’s history sets the stage for Second Isaiah’s monotheism and for a more liberal, humanistic, and universalistic – and less cultic – stream of tradition in Judaism, in the spirit of Amos and the wisdom tradition.” [VAN SETERS, *The Life of Moses*, p468]

A NOTE that the impulse to prefigure the *belated* codification of Israelite history – even the conventional view retailed by Freud, spanning the period from 1000–480 BC (cf, p87, fn233) – with an antecedent oral tradition, not only beggars the fact that Joseph, great grandson of Abram (who was “a very rich man” [GENESIS XIII: 2] and native of the most literate locality on earth), was readily appointed governor of Egypt by Pharaoh, where court and cult were *fairly saturated in script*; but also ignores the mathematical expansiveness of Hebrew scripture (depending on *notation* no less than a treasury account)

B “The Chronicler ends his narrative with Ezra, around 427 BC. Thereafter, until the books of Maccabees take up the story of the Jews in 175 BC [a lacuna of no less than 250 years], we have virtually *no first-hand knowledge* of their fortunes.” (emphasis added) [ALLEGRO, *The Chosen People*, p64]

The injunction against alteration⁶¹³ of the scriptures did not preclude interpolation, particularly the accumulation of related documents or accounts subsumed beneath the rubric of a common title. Authorities concur that the Bible was not completed earlier than the first century BC⁶¹⁴ – largely during the period of Hasmonæan rule (150–63 BC) and the rise of the Essenes. As noted (p189), this period

613 “While there was a succession of prophets, it was of course possible for earlier sacred writings to be added to and edited...without committing the sacrilege about which warnings are given in Deuteronomy 4: 2; 12: 32; Proverbs 30: 6. The same applies to other parts of the Old Testament.” [*New Bible Dictionary*, p167]

A NOTE however, that the text expressly enjoins additions:

“You must add nothing to what I command you, and take nothing from it, but keep the commandments of Yahweh your God just as I lay them down for you.” [DEUTERONOMY IV: 2]

B NOTE further that these injunctions were primed, as I contend, to preserve the integrity of apparently insignificant *measures* secreted within the texts – measures, which I have shown, impart the essential meaning of Biblical (as well as mythic) scripture – rendering the seamless addition of supplementary texts admissible

614 “No-one doubts that the Pentateuch was both complete and canonical by the time of Ezra [458–444 BC] and Nehemiah [445–433 BC], in the fifth century BC, and it may have been so considerably earlier. In the third century BC it was translated into Greek, thus becoming the first part of the Septuagint. In the mid-second century BC we have evidence of all five books, including Genesis, being attributed to Moses (see Aristobulus, as cited by Eusebius, *Preparations for the Gospel* 13.12). Later in the same century the breach between Jews and Samaritans seems to have become complete, and the preservation of the Hebrew Pentateuch by both parties since proves that it was already their common property....The date when the Prophets and Hagiographa were organized in their separate sections was probably about 165 BC...the Canon of the Prophets having been closed about the third century BC, before a history like Chronicles and a prophecy like Daniel (which, it is alleged, naturally belong there) had been recognized as inspired or perhaps even written. The Canon of the Hagiographa, according to this popular hypothesis, was not closed until the Jewish synod of Jamnia or Jabneh about AD 90, after an open Old Testament Canon had already been taken over by the Christian church.” [*New Bible Dictionary*, pp169/70]

also witnessed the composition of the signal calendrical texts of *Jubilees* (143–104 BC) and *Enoch* (130–100 BC) – as well, perhaps, as the earliest non-Christian compositions of Judaic or Samaritan Gnosticism (*cf.* p96, fn261).⁶¹⁵

A NOTE the chronological projections suggested by the editors of the *Jerusalem Bible* for the various books beyond the Pentateuch (the date 525 BC, employed to *represent* post-exilic redactions):

743–525	AMOS (783–743 BC) [p1256]
740–525	ISAIAH [p970]
740–525	MICAH [p1256]
720–525	HOSEA [p1256]
621–538	JOSHUA, JUDGES, SAMUEL, KINGS, RUTH [p229]
612–525	NAHUM [p1256]
609–525	ZEPHANIAH [p1256]
605–597	HABAKKUK [p1256]
605–525	JEREMIAH, BARUCH [p1067]
585	LAMENTATIONS [p1067]
571–525	EZEKIEL (571–539 BC) [p1174]
525	SONG OF SOLOMON [p865]
520	HAGGAI [p1256]
520–517	ZECHARIAH [p1256]
500–400	PSALMS (<i>collating older texts</i>) [p675]
500–400	PROVERBS (<i>collating older texts</i>) [p811]
500–400	JOB [p630]
500–400	JONAH, OBADIAH [p1256]
500–300	TOBIT [p523]
400	JOEL [p1256]
350	MALACHI [p1256]
300	ESTHER [p527]
300–200	EZRA, NEHEMIAH, CHRONICLES [p426]
300–200	ECCLESIASTES [p854]
167–164	DANIEL [p1230]
165–132	ECCLESIASTICUS [p901]
100	JUDITH [p523]
100–10	WISDOM [p875]
63–10	MACCABEES (175–134 BC) [p569]

⁶¹⁵ “There is a long-standing debate among historians of religion as to whether Gnosticism is to be understood as only an inner-Christian development or as a movement broader than, and hence independent of, and perhaps even prior to Christianity. This debate seems to be resolving itself, on the basis of the Nag Hammadi library, in favor of understanding Gnosticism as a much broader phenomenon than early Christian heresy-hunters would lead one to think.” [ROBINSON, *The Nag Hammadi Library*, p6]

The library of Nehemiah (referred to in the second letter to brethren Jews in Egypt)⁶¹⁶ appears to confirm a late fifth-century origin for the Bible project – summoning, yet again, the dates which delimit the Judaic lacuna (p211, fn612B): the author of *Maccabees* at the inner limit of the dark period (175 BC), projecting the start at the outer limit (427 BC). Affording greater evidence, it would appear, of increasing editorial activity in the second, than the fifth, century BC.

The accumulation of Nehemiah's library coinciding with the introduction of Meton's calendar (432 BC), however, lends to the suspicion that the subsequent collation and redaction of Israelite scripture – however long it may have taken – involved the *interpolation* of the Mosaic narrative (the 19-year calendar of Meton compelling the *revision* of the Book of the Law which had been preserved intact for some 200 years since its 'recovery' from the ruins of the Temple at Jerusalem).

It bears noting at this juncture, that Jerusalem was said by Manetho (according to Josephus) to have been founded by the Hyksos after they fled Egypt.⁶¹⁷ Identified with the

616 "...it was also recorded, both in the archives and in the Memoirs of Nehemiah [*fn*: "An uncanonical book, not the memoir included in Ezra-Nehemiah"], how he founded a library and made a collection of the books dealing with the kings and the prophets, the writings of David and the letters of the kings on the subject of offerings." [II MACCABEES II: 13]

617 "This writer, who had undertaken to translate the history of Egypt from the sacred books, began by stating that our ancestors came against Egypt with many tens of thousands and gained the mastery over the inhabitants; and then he himself admitted that at a later date again they were driven out of the country, occupied what is now Judæa, founded Jerusalem, and built the temple." [MANETHO LIV, p119 – cited by JOSEPHUS, *Contra Apionem* I. 26: 228]

"His account is as follows: 'After the departure of the tribe of Shepherds from Egypt to Jerusalem...'" [MANETHO L, p101 – cited by JOSEPHUS, *Contra Apionem* I. 15: 94]

A NOTE that these fragments are collected under the general heading: THE HYKSÔS AGE, c 1700 – c 1580 BC; referring to "the Seventeenth Dynasty [who] were Shepherd Kings" [p95]

B NOTE further the concurrence of Dynasty XVII with the phase which their god Seth embodied (the first waning phase, day 17)

‘Amu, Hittites and Hurrians,’⁶¹⁸ their first king, Saïtês, was said to have “added twelve hours to the month, to make its length 30 days; and he added 6 days to the year, which thus comprised 365 days”.⁶¹⁹ Despite the additional intercalary day (emended in a footnote, to ‘5’), this reference preserves explicit evidence of a calendrical revision introduced at the outset of the Hyksos intrusion. While both extracts of this section of Manetho, from Eusebius, identify the era of the Hyksos as the period when Joseph “ruled in Egypt”.⁶²⁰

Routed to Jerusalem by Ahmose some 103 years after their arrival,⁶²¹ the Hyksos flame was presumed extinguished at Kadesh under Tuthmosis III.⁶²² Yet subsequent campaigns

618 “In Egyptian texts the ‘infamous’ (Hyksôs) were denoted as ‘Amu – a title also given to the Hittites and their allies by Ramessês II in the poem of the Battle of Kadesh....It is certain that with the Hyksôs numerous Semites came into Egypt: some of the Hyksôs kings have Semitic names....The Hyksôs brought with them from Asia their tribal god, which was assimilated by the Egyptians to Sêth, the god of foreign parts, of the desert, and of the enemy.” [WADDELL, *Manetho*, pp76/7n]

619 MANETHO XLIX, p99 – cited from the Scholia to PLATO, *Timæus* XXIE

NOTE that the length of the mean lunation (29.530588 days) encompasses 29 days 12 hours 44 minutes 3 seconds

620 MANETHO XLVIIIa, pp95–7 – cited from Syncellus; and XLVIIIb, p97 – cited from the Armenian version of Eusebius

621 “Thummôsis [*fn*: “Amôsis”], the son of Mishphragmuthôsis (he continues), attempted by siege to force [the Hyksos] to surrender, blockading the fortress [of Avaris] with an army of 480,000 men. Finally, giving up the siege in despair, he concluded a treaty by which they should all depart from Egypt and go unmolested where they pleased. On these terms the Shepherds, with their possessions and households complete, no fewer than 240,000 persons, left Egypt and journeyed over the desert into Syria. There, dreading the power of the Assyrians who were at that time masters of Asia, they built in the land now called Judæa a city large enough to hold all those thousands of people, and gave it the name of Jerusalem.” [MANETHO XLII, pp87–9 – cited by JOSEPHUS, *Contra Apionem* I. 14: 88–90]

NOTE that ‘shepherd-king’ refers to the ascendancy of the 8-year ‘great year’ of the goat which succeeded the reign of the ram

622 WADDELL, *Manetho*, p87n2 – citing “Breasted (C.A.H. ii. p83)” – *cf*, p76, fn203

into “Cyprus and Phœnicia” imposed on his descendant “Sethôs, also called Ramessês” suggest the possibility of a rebel retrenchment. During these campaigns, Harmaïs, the brother of Sethôs,⁶²³ abusing his regency in Egypt, forced the return of the pharaoh.

“The warden of the priests of Egypt then wrote a letter which he sent to Sethôsis, revealing all the details, including the revolt of his brother Harmaïs. Sethôsis forthwith returned to Pêlusium and took possession of his kingdom; and the land was named Ægyptus after him. It is said that Sethôs was called Ægyptus, and his brother Harmaïs, Danaus.” [MANETHO I, p105 – cited from JOSEPHUS, *Contra Apionem* 1.15/6:101/2]

Which corroborates the perceived connection between the putative variable-month Set measure of the Hyksos with both Israelite and Greek Dan measures, while reinforcing the impression that sustained pursuit of the calendar rebels by the Egyptian defenders of the Bel orthodoxy, impelled the retreat of the Danaïd infidelity to Greece.

In this regard, the significance of the *Sethian* sect of the Gnostic tradition may trace its roots to the seminal Hyksos measure (illuminating the *Satanic* depths which the early Christians fathomed for its emergence).⁶²⁴ Gnosticism – lit thus – an indelible shadow of the rebel Set tributary riven

623 “W. Struve would here emend Sethôs into Sesôs, which was a name of Ramesês II...” [WADDELL, *Manetho*, p103n3]

NOTE that the name Harmaïs is also given as Armæus (p243) and Hermæus (p106) – associating the Danaïd 99-month calendar with Hermes god of measure and the alphabet

624 “As is shown by the very titles of the [Nag Hammadi] documents, but above all by their contents, the 53 texts belong to different religious groups, the Gnostics and to a lesser extent Hermetic societies. Gnostic and Hermetic documents indeed in one codex follow one another. To this co-existence of documents from different, even if mutually related, religious communities, we may add the fact that the gnostic documents are to be ascribed to different schools within Gnosis. In some texts for example Seth plays a major role, in others Barbelo. Nevertheless these documents cannot simply be assigned to the Sethians or the Barbelognostics, for in some texts several of these gnostic entities appear side by side...” [FÆRSTER, *Gnosis*, pp6/7]

NOTE that *Barbelo* is composed of the prefix *bar*, “son of”, and *Bel[o]* – the Set measure descending from its Bel progenitor

deep in the hinterland, from the unremitting stamp of Bel's advancing hordes. Yet remote from the Isralite font of the sole god, in their admission of the seven spectres of the Egyptian source⁶²⁵ – like the correlative Greek confluence.

The radical Set rebels – pursued by Egyptian, Babylonian and Assyrian Bel censors – scattered the shrapnel of their concussive revolt throughout the Levant: pockets of Set resistance entrenched beyond detection, nurturing distinct varieties on the variable-month stock,⁶²⁶ before the blush of an ethereal 19-year bloom would crown their *neferious* weed the most luminous of all nightly strains.

- 625 “This is like the three shapes of Phoenixes of Paradise: the first is immortal [the 500-year Phoenix ‘great year’ undiscerned in nature; cf. p262], the second attains 1000 years [$2 \times 500 = 1000$], as for the third it is written in ‘the Holy Book’ that ‘he is consumed’ [1500 years yet ‘consumed’ by the 1767-year cycle].”
 “Again let us come to the rulers of whom we spoke, so that we might present their proof. For when the seven rulers were cast out of their heavens down upon the earth, they created for themselves angels, *ie*, many demons, in order to serve them. But these demons taught men many errors with magic and potions and idolatry, and shedding of blood, and altars, and temples, and sacrifices, and libations to all the demons of the earth, having as their co-worker Fate, who came into being according to the agreement by the gods of injustice and justice. And thus when the world came to be in distraction, it wandered astray throughout all time. For all the men who are on the earth served the demons from the foundation until the consummation of the æon – the angels served justice and the men served injustice. Thus the world came to be in a distraction and an ignorance and a stupor. They all erred until the appearance of the true man [Set].” [‘On the Origin of the World’ translated by Hans-Gebhard Bethge & Orval Wintermute, in ROBINSON, *The Nag Hammadi Library*, pp176/7]

NOTE that this injunction alludes to unwitting acceptance by the uninitiated (including clergy), of the phantasmagorical ‘gods’ or ‘angels’ conjured to *represent the focal lunar spectres*, as the system of measure (surviving its architects) invariably degenerates into myth – invoking faith (and thereby stupor) – in place of the sustaining insight of gnosis; in otherwords, the author insinuates that religious probity has foundered on the most *fundamental* misrepresentation of all

- 626 Atenism, Judaism, Gnosticism, Hermetism, Olympian pantheism, Kabeiran and Pythagorean mysticism *et al*

APPENDIX

PYTHAGOREAN ORIGIN OF THE ESSENES

JOSEPH, MARY, JOHN, JESUS and their followers, it must also be appreciated, were members of a splinter faction of that most ascetic sect of Judaism, the Essenes – a gnostic enclave which esteemed ‘knowledge of the divine’, above faith. Their community at Qumran is identified in the Dead Sea scrolls as ‘the Sons of Light’, ‘the New Covenant’ and ‘the Way’. As Barbara Thiering conceived it, the group “was united by its use of the solar calendar” – the Jubilee measure of fifty years.¹

She goes on to point out, “their interest in a mathematically governed order of the universe was encouraged by their contact with Pythagorean thought, which was widely held in the hellenistic culture of the day. The Essenes were regarded by their contemporaries as following the way of life taught to the Greeks by Pythagoras (Josephus, *Antiquities of the Jews* xv: 371).”²

The Pythagorean belief adopted by the Essenes – that the future could be predicted by determining the intervals between great events of the past and projecting the series forward – traced its deepest roots to lunar observance. Yet subsequent schools of gematrial projection turned unavoidably to scripture for their reckoning of past events – anthologies such as the Bible affording scholars the expedient of plotting the course of great events from a sanctioned canon of seminal accounts (the texts secreting measures and numbers focal to the extraction of their solution).

Reginald Fessenden maintained that the Pythagorean school was ultimately relocated to Britain:

“The valley of the Alizon [Elysion, or Hyperborea, east of Eden in the Caucasus valley; *ie*, Azerbaijan] was the hidden home of a great secret society, called Kabiri (Aburi) by the Ur, and Dactyli (Achali) by the Al, which for thousands of years permeated the institutions of the ancient world and in more

1 THIERING, *Jesus and the Riddle of the Dead Sea Scrolls*, p161
NOTE that the Jubilee period – extending seven ‘weeks’ of years (or 49 years) – was ‘justified’ in the fiftieth year [see p256]

2 THIERING, *op cit*, pp162/3

than one era attempted to entirely control them. The society originated on the north side of the Caucasus mountains but for some reason, possibly secrecy and freedom from disturbance by Scythian raids, removed to the Alizon valley, where they remained until about 600 BC, after which they disappear.... The Kabiri had much knowledge of numbers, of geometry, and of astronomy, but their great power was derived from their knowledge of technical secrets, the making of glass, of steel, of enamels, of reducing ores, *etc.*... The society built temples and established mysteries,³ *eg*, at Delos, Samothrace and Eleusis.... The Kabiri certainly maintained records, for we have the *Acherontici libri*, to which class possibly the books of Numa belonged. They had observatories of some kind, the prototypes of the ziggurat of Babylon....” [FESSENDEN, *The Deluged Civilization of the Caucasus Isthmus*, pp55/6]

They likely took their name from that of their goddess, Cybele, the earth-mother to whom they erected cone-shaped massebas (gnomon-stones).⁴

“The ziggurats of Babylon had horns on them, a primitive kind of transit, derived from the earlier use, for this purpose, of the horns of a bull. The peculiar bull horn ornaments of some Minoan public buildings possibly had their origin in this use and may have functioned as sun dials; they are represented as associated with the Cabeiri. No substantial advance in science or technology appears to have been made from the time of the Deluge to the break up of the Cabeiri, about 550 BC. During all this period science and technology were in the hands of this close corporation, but about 600 BC the Scythians, who had been expelled from Asia, made it impossible for them to maintain the headquarters of their organization in the Apscheron Peninsula. The attempt by Zalmoxis and Pythagoras to establish a new headquarters in Italy failed, it was suppressed throughout the Roman Empire, moved to Britain 10 BC, and disappears.” [FESSENDEN, *op cit*, p87]

cf, Kaviroi; Khabiru, Habiru; Khufu (Hwfw or Cheops); Kha-f-Ra (Khafre or Khefren); *kepha*, “head” “mountain”

- 3 “the word ‘mysteria’ means not simply a cult but a ‘secret’, ‘hidden’ cult, which is not manifested to all, but accessible only to the ‘initiate’” [PAUL SCHMITT, “The Ancient Mysteries in the Society of Their Time, Their Transformation and Most Recent Echoes’ in *The Mysteries* Edited by Joseph Campbell, p93]
- 4 “Confirmation that the cult of Cybele flourished in Verulamium [St Alban’s, England] has recently come from an inscribed pot found twelve miles away at Dunstable”. [BRANIGAN, *The Catuvellauni*, p75]

Pythagoras (569–490 BC) acquired his insights from Thales of Miletus (640–550 BC),⁵ pre-eminent among the Seven Sages as the founder of the first school of Greek philosophy (who *reputedly* imported his teachings from Egypt). That the ‘life’ of Pythagoras, however, proves particularly allusive – essentially describing an enclave of esoteric adepts – may be gleaned from the details.

The colony of Cephallenia (*cf.* *kepha*) at Samos – initially called Melamphyllus (“having black leaves”) – was reputedly founded by Ancæus by order of the Pythian oracle, and included colonists from Athens, Epidaurus, Chalcis, Arcadia and Thessaly. An allusion to Melampus is detectable – the seer (and grandson of Æolus) who “took care of some young serpents whose parents had been killed by his servants, and these one day licked his ears as he was sleeping. Thereafter he understood the language of birds and could predict the future”.⁶ The association is supported by the fact that the brother of Melampus, Bias, has the same name as one of the Seven Sages (among whom Thales was pre-eminent).

According to Iamblichus, Pythagoras was born during a visit to Sidon in Phoenicia where his father acquired his wealth as a trader (in tin?), after the Pythian oracle had predicted his son would surpass “in beauty and wisdom all that ever lived”.⁷ In gratitude, Mnesarchus,⁸ his father, not only named the child Pythagoras but also renamed Parthenis his wife, Pythaïs.

The emphasis on the oracular origin of Pythagoras augments the allusion to Melampus – the serpents (representing the twin braids of Okeanos; *cf.* caduceus) “licking the ears” or speaking underwater to the seer “as he was sleeping” (*ie*,

NOTE that the cone-shaped massebas share derivation with the *beni* stone of the ancient Egyptians (*cf.* p105, fn 285)

5 Thales → tallies → *tailler* (“to cut” – implying ‘divide’ or ‘measure’)

6 HARVEY, *The Oxford Companion to Classical Literature*, p264

7 IAMBlichus, *Life of Pythagoras* A, p204

8 NOTE that ‘Mnesarchus’ incorporates *menes* (“moon”) + *archus* (as in ‘archbishop’ or high priest)

at night) to instil an understanding of “the language of birds” (birds approaching closer than anything else but fish to the gods – their *language* equated with flight, like letter-forms extracted from the moon) enabling him to predict the future, through a grasp of lunar measure.

On his return to Samos, Mnesarchus erected a temple to Apollo with its inscription to Pythius. Pythagoras was given the best education and celebrated as ‘the long-haired Samian’⁹ under the conspicuous influence of “divine inspiration”. At 18, on the introduction of the tyranny of Polycrates (551 BC),¹⁰ he left Samos with Hermodamas Creophilus – grandson of the preceptor of Homer – to reside variously at Miletus with Anaximander and Thales, and at Leros with Pherecydes.

Thales “apologizing for his old age, and the imbecility of his body, exhorted him to sail into Egypt, and associate with the Memphian and Diospolitan priests” from whom he had learned.¹¹ After sailing to Sidon to converse with “the prophets who were the descendants of Mochus the physiologist...and also with the Phœnician hierophants” Pythagoras was initiated in “the mysteries of the Phœnicians, which were derived like a colony and a progeny from the sacred rites in Egypt”.¹²

From Byblos and Tyre he made a retreat to the temple under Mount Carmelus where he remained “separated from all society” before embarking for Egypt. A remote and sparsely-populated promontory, Mount Carmel overlooks the Mediterranean not 23 miles from Nazareth, putative home of Jesus (whose Essene sect, according to Josephus, “live the same kind of life as do those whom the Greeks call Pythagoreans”).¹³ Thus we find Pythagoras gaining

9 *cf.* the Nazirite or untonsured proclivity of Jesus

10 because Iamblichus claims Pythagoras moved to Italy at 56 in the 62nd Olympiad (528 BC) his date of birth would appear to have been 584 BC, yet Polycrates is thought to have taken Samos about 535 BC (when Pythagoras was 18) – presenting a discrepancy of some 31 years

11 IAMBlichus, *Life of Pythagoras* A, p205

12 IAMBlichus, *op cit*, p206

13 JOSEPHUS, *Antiquities of the Jews* xv. x: 4, p333

insights hard by the locality of those he purportedly influenced some six centuries later. Which suggests that this temple or ‘monastery’ at Carmel remained a predominant outpost of an enduring esoteric tradition over a considerable period of time.

More pregnant yet, before boarding an Egyptian ship for Egypt he is said to have fasted “in one and the same unmoved state for two nights and three days, neither partaking of food, nor drink, nor sleep”.¹⁴ Which accords with the period between lunations when there is no visible phase in the sky – a decidedly “unmoved” or unrelieved state. This identifies the temple at Carmel unmistakably as a lunar observatory (not surprisingly, given its survey of the sea) – the Hebrew word *karmel* signifying “garden land” or “fruitful land”, conveniently ‘cognate’ with the ‘garden’ of the Hesperides (*cf.* p217).

Pythagoras spent 22 years in Egypt “in the *adyta* of temples, astronomizing and geometrizing, and was initiated, not in a superficial or casual manner, in all the mysteries of the Gods, till at length being taken captive by the soldiers of Cambyses [525 BC], he was brought to Babylon. Here he gladly associated with the Magi, was instructed by them in their venerable knowledge, and learnt from them the most perfect worship of the Gods. Through their assistance likewise, he arrived at the summit of arithmetic, music, and other disciplines; and after associating with them 12 years, he returned to Samos about the 56th year¹⁵ of his age”.¹⁶ An itinerary associating the geodetic centres of the esoteric tradition.

Back in Samos Pythagoras discovered that pragmatic folk lacked the aptitude to interpret his new “symbolical mode of teaching” prompting his relocation to Delos, Crete,

¹⁴ IAMBLICHUS, *Life of Pythagoras* A, p207

¹⁵ he left Samos at 18, spent 22 years in Egypt and 12 in Babylon, making him 56 – which suggests Pythagoras spent four years in Syria and at Mt Carmel. By this reckoning he would have been 44 when Cambyses took Egypt, establishing the date of his birth as 569 BC. His purported arrival in Italy during the 62nd Olympiad (528 BC), however, still leaves a discrepancy of at least 15 years.

¹⁶ IAMBLICHUS, *op cit*, p208

Sparta and finally Croton (Calabria, Italy). The school in Samos was known as ‘the Semicircle of Pythagoras’ – clearly symbolic of the half-moon, divine source of both ‘measure’ and ‘gnosis’.

The Order at Croton – 600 *Cænobitæ* sharing possessions in common and bearing the stellar pentagram as their badge – was a signal outpost of *Magna Græcia*. Adepts observed a vegetarian diet (like some Essenes, and much later, the Cathars) abjuring excess while investigating astronomy, divination, mathematics, music, philosophy, politics and symbolism. Their master was celebrated by some “as the Pythian [by] others as the Hyperborean Apollo [while] some again considered him as Pæon [Apollo], but others as one of *the dæmons that inhabit the moon*”. He represented “whatever is anxiously sought after by the lovers of learning [*ie*, gnosis]”.¹⁷

He had not only learned from the followers of Orpheus, Egyptian priests, Chaldeans, Magi and the various mysteries at Eleusis, Imbros, Samothrace and Delos but also “from those which are performed by the Celtæ, and in Iberia”.¹⁸ Intercourse with the Celts is further attested in his ‘fabled’ accounts with Abaris, high priest of Hyperborea (*ie*, Britain) who was “carried on the dart [*ie*, lunar crescent] which was given to him by the Hyperborean Apollo, [and] passed over rivers and seas and inaccessible places, like one walking on the air”. Pythagoras “showed his golden thigh to the Hyperborean Abaris, who said that he resembled the Apollo among the Hyperboreans”. He also “received from [Abaris] at the same time the golden dart, without which it was not possible for him to find his way”.¹⁹ Expressly indicating that the Pythagoreans derived their lunar insights from the high priest at Stonehenge.

The reference to the golden thigh recalls the birth of Dionysus who was born “untimely” of Semele when she was consumed by the lightning of Zeus, her child’s father. Semele was “the moon” – the daughter of Cadmus, who

¹⁷ IAMBlichus, *Life of Pythagoras* A, pp211/3 (emphasis added)

¹⁸ IAMBlichus, *op cit*, p255

¹⁹ IAMBlichus, *op cit*, pp249/50

delivered the alphabet to Greece. “But Hermes saved her six-months son; sewed him up inside Zeus’s thigh, to mature there for three months longer;²⁰ and, in due course of time, delivered him. Thus Dionysus is called ‘twice-born’, or ‘the child of the double door’.”²¹

Pythagoras was also noted for wearing only pure white garments – recalling the adjective used so insistently in every Gospel to describe the burial shroud of Christ. His miracles further anticipate those of Christ (*eg*, calming the seas, expelling winds and pestilence, *etc*).

His name means ‘mouthpiece of Delphi’ (or ‘of the serpent’ – Delphi originally called Pytho; *cf*, the young serpents of Melampus) – resounding his *understanding* of the focal Orphic precept that although the letters preserve the story the numbers tell the story (*mathesis universalis*).²²

Delphi was the centre of the cult of Apollo. According to Diodorus Siculus (80–20 BC), Britain or Hyperborea was the location of another focal temple of Apollo – which gave rise to the name Isle of Avalon (Avalon = Apollon). The Isle of Avalon was equated by the earliest British historians with Glastonbury – the putative destination of Joseph of Arimathea.²³

Native land of Apollo’s mother, Leto,²⁴ Hyperborea was also the sanctuary of the golden apples (*cf*, Apollo) of the

20 echoing the three days before the new crescent appears

21 *ie*, his first birth, into darkness, remains undetectable and unobserved [GRAVES, *The Greek Myths*, p56]

22 Orpheus said “that the eternal essence of number is the most providential principle of the universe...the root of the permanency of divine natures, of Gods and dæmons” [IAMBlichus, *Life of Pythagoras* A, p253]

23 Joseph of Arimathea, according to a stubborn tradition among British tinsmiths “made his money in the tin trade with Cornwall” [LEWIS, *St Joseph of Arimathea at Glastonbury*, p167]

24 Apollo was delivered on the ninth day of Leto’s labour – the day of half-moon (birth of the convex quarter) – with the help of his twin Artemis who emerged first, their mother pursued at Hera’s command by the serpent Python who would not permit their birth where the sun shone (thus relegated to the underworld, in which the moon is half-submerged on day nine; twain → twin); *cf*, *lethe* or “oblivion” – *ie*, in the direction of the netherworld

Hesperides, the 28 daughters of evening (*ie*, lunar phases) whose father Atlas was condemned to hold up the world for eternity.²⁵ Heracles was charged by Eurystheus to fetch the apples as his eleventh labour, which involved overcoming their guardian, the terrible dragon Ladon (*ie*, ‘moonster’) whose parents were Typhon and Echidne, as were those of the Sphinx (the Sphinx, thus, a sentinel of lunar cycle). Heracles killed Ladon with one arrow (new crescent) shot over the garden wall (*ie*, the dark divide of two nights without a visible moon in the sky, between lunations – the underworld, the ‘garden’ of harvested phases).²⁶

The apple was sacred because of the five-pointed star bisected across its core – the stellar pentagram of the Pythagoreans thereby identifiable as an Apollonian badge.

Independent sources trace the Pythagoreans to Britain (the name ‘Pythagoras’ meaning “mouthpiece of Delphi” – centre of the cult of Apollo – Delphi also known as Pytho, for the Python dispatched by Apollo); identify the Essenes as Pythagorean; situate a focal temple of Apollo in Britain (*ie*, Stonehenge); and trace Joseph and his Essenic band of twelve (with the Shroud – literally ‘the Grail’ or ‘two cruets of Christ’s blood and sweat’) to Britain.

Subsequent British sources maintain that Arviragus, king of the Catuvellauni (and overlord of the Britons) became the first convert to Christianity in Britain (about 37 AD) and that St Mary’s church at Glastonbury comprised “the first known above-ground church in the world”.²⁷

Although the morpheme ‘ver’ prevails among the names of Celtic leaders before the advent of the Christians, it bears noting that *ver* means “spring” (*cf*, *ri-ver*) and that if baptism cults in fact preserved their rite in sanctification of the monthly rebirth of the moon from her exile in the underworld, the honorific ‘ver’ could conceivably signify ‘anointed’ implying ‘initiated’.

25 *cf*, the twin peaks of Mashu (*cf*, *mashmashu*, ‘diviner’)

26 APOLLODORUS II.V:11, VOL I, pp218–33

27 LEWIS, *St Joseph of Arimathea at Glastonbury*, p23

THE ISLAND OF KEPHALLENIA, commanding the entrance to the Gulf of Corinth, emerges from the Ionian Sea just north of the 38th parallel aside its much smaller sister isle of Ithaca. Legendary home of Odysseus, Ithaca extends north of the Gulf about a quarter the length of Kephallenia, east across a narrow strait. Samos, capital of Kephallenia, surveys a secure harbour on a parallel directly adjacent to the entrance to the Gulf.

Samos – the island in the Ægean Sea which legend identifies as the home of Pythagoras – is situated coincidentally just south of the 38th parallel off the west coast of Anatolia (known during the Classical Age as Ionia). Iamblichus claimed that Ancæus was commanded by the Pythian oracle at Delphi to establish a colony at Samos to be called Cephallenia, composed of colonists from Athens, Epidaurus, Chalcis, Arcadia and Thessaly – which would suggest that the island of Samos in the Ægean comprised a colony of Kephallenia of the Ionian Sea.²⁸ Modern authorities, conversely, contend that Ionians from Anatolia established colonies in the seven major Ionian Islands, from which the Ionian Sea ultimately came to be named. While the editors of the *Atlas of Ancient and Classical Geography* distribute the islands among the Dorians (Corcyra, Paxos, Leucas and Cythera) and Æolians and Achæans (Kephallenia, Ithaca and Zacynthus). [p32]

The name Ancæus was common to two of the Argonauts: one the son of Lycurgus of Tegea in Arcadia²⁹ (or son of Poseidon) and steersman of the Argo; the other a Lelegian of Samos.³⁰ Iamblichus claims Ancæus lived in Samos on

28 *Cephallenia* is employed here to distinguish the ‘colony’ on the island of Samos in the Ægean Sea from the island of *Kephallenia* in the Ionian Sea

29 the elder brother of Lycurgus, son of King Aleus, was Cepheus; while the city of Tegea is situated very near the source of the river Alphæus

30 the Leleges were early inhabitants of the Ægean littoral, Pherecydes of Leros identifying them as the aboriginal Carians whose territory included Samos, Miletus and Leros (although

Kephallenia and was a son of Zeus. The Attic orator Lycurgus (fourth century BC) was a member of the Eteobutadæ or hereditary priesthood of Poseidon Erechtheus (Erechtheus being the father of Creusa who gave birth to Ion, son of Zeus – her husband Xuthus ultimately credited as the legendary progenitor of the Ionians, by having adopted him). Creusa was also the name of the wife of Æneas (preceding Lavinia), mother of Ascanius – and thereby great-grandmother of Brutus (effectively associating the Ionians with the Trojans and Britain; cf. Ænean → Ionian).

Procris, another daughter of Erechtheus, after being deserted by her husband Cephalus, removed to Crete where she was seduced by Minos. Notorious for his pursuit of nymphs, Minos had greatest difficulty curbing his desire for the moon-goddess Britomartis of Gortyna in southern Crete, who was known as Dictynna in the western part of the island. Cephalus ultimately received the Teleboan island of Kephallenia for his support of Amphitryon of Thebes (father of Iphicles brother of Heracles, the ‘twin’ fathered by Zeus) in defeating the Teleboans. The uncle of Ion by marriage, Cephalus was destined to leap to his death from Cape Leucas (at the head of the island of Leucas north of Kephallenia) into the sea – not unlike the demise of waning crescent – by the Temple of Apollo of the White Rock (*ie, luna; Leucas* likewise signifying “white”).

Procris encounters her reflection in the eldest daughter of Thespius (or Thestius) the Athenian Erechtheid and close neighbour of Amphitryon of Thebes. Thespius and his wife Megamede (the daughter of Ameus) had fifty daughters, each of whom slept with Heracles while he was in Thespiæ hunting the lion of Cithæron – except for one who remained a virgin until her death. The 49 Thespiads gave birth to 51 sons³¹ – twins by the eldest (Antileon and

Hesiod puts them in Locris in central Greece, near Delphi, suggesting intercourse with Anatolia)

- ³¹ the 8-year (99-month) lunisolar cycle of 5 twelve-month plus 3 thirteen-month years comprises 49 months of 29 days (1421) plus 50 months of 30 days (1500) or 2921 days for the entire cycle – the synodic equivalent for eight years amounting to

Hippeus) and the youngest. Which preserves a mnemonic of the *octaeteris* or 8-year (99-month) calendar, like the myths of the 50 Danaïds, Pallantids and Nereids.

Erichthonius king of Athens, by comparison, was considered half-serpent half-man because he was the product of Hephaestus his father's premature ejaculation onto the thigh of Athena which she flicked disdainfully to the ground accidentally fecundating Gaia or Mother Earth. Erichthonius, considered by Graves "perhaps an expanded form of Erectheus",³² was raised by Aglauros daughter of Cecrops "the first king to recognize paternity",³³ and like Erichthonius, a son of Gaia held to be part-serpent part-man. The serpent-man, like the scorpion-man in *Gilgamesh*, represents the priest-king who comprehends the secrets of lunar mechanics, the cult of dragon-slayers who had cracked the language of the underworld python. Recognition of paternity depends upon an understanding of the importance of copulation to procreation – sperm germinal to conception – highly conspicuous in this myth. It is notable in this respect, that Cecrops gained the throne through his wife Agrauros daughter of Actæus the first king of Attica (*ie*, original kingship memorialized as passing through the female line to the first man to recognize paternity and thence

2923.5282 days (29.530588×99); the solar equivalent, to 2921.9376 days (365.2422×8). One mnemonic for this calendar is presented in the myth of the grandchildren of King Belus of Egypt: the 50 daughters of Danaüs, king of Argos, having been instructed by their father to dispatch the 50 sons of his brother Ægyptus who had pursued them to Argos from Egypt with hopes of matrimony (the marriage of male and female months preserving the mnemonic of extended sequences). All but Hypermnestra complied with their father's instruction: her suitor Lynceus, the sole survivor among the sons of her uncle Ægyptus. Her sisters were consequently condemned to Hades to labour incessantly filling with water a jar with holes. The 49 victims – representing the 29-day, or male, months – in effect 'marry' their murderers in Hades (*ie*, the underworld where the new month begins). The 100-eyed Argus guarding Io likewise memorializes an earlier division of the *octaeteris*.

32 GRAVES, *The Greek Myths*, p99

33 GRAVES, *op cit*, p97

through the male line – Cecrops followed by Erichthonius and his Erechtheid descendants such as Thespius).

Herse (the youngest of the three daughters of Cecrops), taken forcefully by Hermes, bore him two sons: Cephalus and Ceryx. It should go without saying, the recurrence of cognates in close relation among these variant myths invites a reconsideration of the topical and topographical details they subtend (eg, Agrauros/Aglauros; Herse/Hermes; Ion/Io; Cephalus/Cepheus *etc.*).

The term 'Ionian' is first encountered in the works of Æschylus (d 456 BC), derived arguably from the interminable wanderings of Io, tormented daughter of Inachus,³⁴ river-god and first king of Argos (though Argus was also the name of the hundred-eyed herdsman Hera had watch over Io after she'd been transformed into a heifer). Consonance with the Argonauts and Ancæus (cf, Achæans ↔ Okeanos) is conspicuous; while another Argos, distinct from the famous Mycenean centre near the east coast of the Peloponnese, is situated in Amphilochia at the eastern end of the gulf whose entrance is just north of Cape Leucas. Io first removed to Dodona north of Argos Amphilochicum in flight from Hera's gadfly (before retracing the route of the Argonauts north and east to Colchis, or Æa – modern Georgia), thereby lending her name purportedly to the Ionian Sea.

Argos in the Peloponnese was the chief shrine of Io the horned moon-goddess, according to Robert Graves.³⁵ Io was changed into a white heifer by Zeus to hide her from his wife Hera; while Zeus curiously also transformed himself into a bull to seduce Europa and father Minos (who would summon a white bull from the sea on assuming the throne of Crete). His wife Pasiphæ would subsequently bear the Minotaur after coupling ingeniously with her husband's divine white bull – a sustaining symbol of lunar

34 Inachus is cognate with Okeanos (in metathesis) the braid of celestial streams surrounding the earth, out of which Io the virginal moon-goddess raises her heifer spectres (cognate with the sacred cow and bull as distinct symbols of lunar cycle)

35 GRAVES, *The White Goddess*, p255

cycle: white like the moon (*alba*); with horns representing waxing and waning crescents, the beginning and end of lunar cycle (*aleph* – or *alpha* which is cognate with *alba*, showing that it was derived from something clearly white – and *tau*: the beginning and end of the alphabet introduced by an uncle of Minos, both signifying “bull”).

Europa (sister of Cadmus, who reportedly introduced the alphabet into Greece), was the daughter of Chnas (Agenor to the Greeks), king of the Phœnician city of Tyre. Cognate with ‘Enki’ (in metathesis) – the Sumerian elemental god of water (also known as Ea) credited with the origin of script – ‘Chnas’ further harbours an echo of ‘Inachus’. Europa the daughter of Chnas became queen of Crete while Io the daughter of Inachus would ultimately settle in Egypt as the moon-goddess Isis, mother of Epaphos (equated with Apis the divine bull of Memphis), after attempting to evade the gadfly following her flight to Dodona – variously at the source of the river Hybristes in the Caucasus (where Prometheus was chained), Colchis, Tarsus, Joppa, Media, Bactria, India, Arabia and Ethiopia. A circuit, presumably, of ‘veristocratic’ outposts. ‘Io’ echoes ‘Ea’ and ‘Æa’ – not to mention ‘Ion’ – while the name of Io’s husband in Egypt, Telegonus, also appears to resound the name of the Teleboans who originally held Kephallenia before Ion’s uncle Cephalus won it.

According to Theopompus, a variant etymology preserved by Strabo traces the term ‘Ionian’ back to Ionius, king of the island Issa north in the Adriatic Sea (where the Dorians are thought by some to have entered, and the Argonauts to have returned from Colchis to Greece). A third signpost leaning persistently north for an origin of the term ‘Ionian’, toward the Illyrian coast.

The Ionian dialect of the Achæans is conventionally thought to have been displaced by that of the Dorians throughout southern Greece sometime before 1100 BC, with the Ionians removing from Argos and surroundings in the Peloponnese, to the west coast of Anatolia, to establish Ionia. Minos and his brothers Rhadamanthus and Sarpedon are said to have quarrelled over the son of Apollo and Dione

(or Areia or Theia), Miletus being forced by Minos to leave Crete when the young boy sided with Sarpedon. Miletus removed to Caria in Anatolia to establish the city and kingdom of Miletus (displacing the giant Asterius and his father Anax who ruled over Anactoria as it was then called). Curiously, the husband of Europa and stepfather of Minos and his brothers was also named Asterius. Note that the son of two moon gods displaces a *giant* king whose name signifies “star” (sovereignty of the moon pointedly eclipsing that of the sun).

Dione (cognate with Diana the Latin Artemis, twin of Apollo) was the mother of Aphrodite goddess of love, who in turn was the mother of Æneas (and Eros or Cupid). Aphrodite embodied attributes also common to Astarte, Phœnician moon-goddess, while being associated with Cyprus and the southernmost of the seven major Ionian islands, Cythera – between Crete and the Peloponnese. Unfaithful Aphrodite and her lover Ares would ultimately be snared in a net by her husband Hephæstus and justly exposed to the ridicule of the gods.

The term for “net” in Crete was ‘dictyon’, the moon goddess Britomartis being rescued by Artemis from the nets of fishermen after plunging into the sea to escape the advances of Minos. “Artemis [thus] deified Britomartis under the name Dictynna; but on Ægina she is worshipped as Aphæa, because she vanished; at Sparta as Artemis, surnamed ‘the Lady of the Lake’; and on Cephallonia³⁶ as Laphria; the Samians, however, use her true name in their invocations.”³⁷ This not only succinctly associates the islands of Ægina, Samos, Kephallenia and Crete with the cult of the moon-goddess, but also extends the influence to the isle of Britain both in the name Britomartis and through the epithet ‘Lady of the Lake’ anticipating the lunar guardian of the Arthurian legends. These are, further, all places visited by Pythagoras (including Hyperborea/Britain) save for Ægina, which in his itinerary substitutes Delos, the island midway

³⁶ *Cephallonia* is a variant spelling generally employed in English maps for the island of Kephallenia

³⁷ GRAVES, *The Greek Myths*, p299

between Samos and Ægina. It is worth adding that the earliest recorded maps of the Mediterranean are said to have been produced by Anaximander (610–547 BC) and Hecataeus (550–500 BC) – both from Miletus where Pythagoras (569–490 BC) was reportedly first introduced to the secrets.

Zeus,³⁸ it bears noting, was saved from being eaten by his father Cronus by his grandmother Gaia who spirited the babe to Lyctos in Crete where he was secreted in the cave of Dicte. Third son of the Titans Cronus and Rhea, Zeus was thus the first Olympian to take his place in the heavens (*cf.* waxing crescent), his five elder siblings all having been consumed at birth by their jealous sire – three sisters: Hestia, Demeter and Hera; and two brothers: Hades and Poseidon. This accords with three days and two nights of no moon in the sky between lunations (the brothers of Zeus both also characterizing ‘submergence’: one in the underworld; the other in the sea). It is further notable that after the Titan gods were at length dethroned by the children of Cronus, the males were summarily banished to Britain.

Crete is also the scene of the seduction of Hera by her brother Zeus disguised as a cuckoo. Their wedding night – lasting 300 years (signal lunar interval) – is spent at Samos where Hera was born. Yet she is characterized as the twin of Zeus who was born on Mount Lycæum, Arcadia (though

38 Zeus was born “at dead of night on Mount Lycæum in Arcadia, where no creature casts a shadow”; interpreted by Robert Graves as a reference to “noon on midsummer day” or variously – because no trespasser on Mount Lycæum was allowed to live – the precinct of the dead who never cast shadows. A moment’s reflection, however, should reveal that the interval of two nights without a moon in the sky is clearly the only time no shadow may be cast (apart from storms or eclipses), a period particularly suited to the epithet ‘dead of night’ (*ie.* when the moon appears to have died). Which accords perfectly with the explanation for the consumption of the elder siblings of Zeus. Mount Lycæum is pointedly situated in Arcadia, source of the river Alphæus, the underground stream (*cf.* *alpha* denoting the first night in a new lunation when the moon is absent from the sky and presumably confined in the underworld stream of Okeanos). [GRAVES, *The Greek Myths*, pp39/43]

evidently older legends fix his birth in Crete).³⁹ The two dominant Olympian Gods of Light tracing a distinct link from Crete to Samos.

THE ENTANGLEMENTS OF MYTH, as becomes evident, prove distinctly forbidding without the recognition that names draw attention to places. Names of characters which suggest others connected with the same places – such as: Cepheus elder brother of Lycurgus father of Ancæus who is enlisted to settle a colony of Kephallenia on Samos; and Cephalus husband of Procris daughter of Erechtheus, who receives Kephallenia as his spoil of war – amplify the putative design of these associations.⁴⁰

Yet who might such geocentric insights have addressed during the ancient era? Particularly concerning such distant outposts as Samos and Kephallenia. Who among the ancients frequented these places sufficiently to appreciate the implications involved? Nothing in the story of Britomartis, for instance, appears of significant benefit to fishermen or traders; neither intimation of fertile banks or favourable lanes (let alone warnings of pirates or unfavourable winds) to warrant commemoration for commerce. And before maps, putting names to places as far removed as Kephallenia and Samos, may only have

- 39 Lycæum in Arcadia and Lyctos in Crete share the common prefix *lyc-* which most scholars including Graves equate with “wolf”, despite their agreement that *leuc-* signifies “white”. Given the particulars of his birth – “dead of night”, absence of shadows, first surviving [phase] of three ‘brothers’ – the legends in fact appear to preserve a lunar relation with ‘white’ in the names of these high birthplaces of Zeus (not to mention that of the steersman of the Argo, Lycurgus – the moon figuratively directing the Argonauts to the land of the Golden Fleece of Ares).
- 40 Edmund Leach’s explanation: “It is common to all mythological systems that all important stories recur in several different versions.... Another notable characteristic of mythical stories is their markedly binary aspect; myth is constantly setting up opposing categories: ‘I am the Alpha and the Omega, the beginning and the end, sayeth the Lord.’” [LEACH, *Genesis as Myth*, pp7/8] NOTE the completed lunation – *omega* = ‘great O’ – begins on a dark night: *alpha* (cf, p140, fn399B; p245)

rung recollection among a notable handful of ‘worldly’ geomancers whose knowledge of the details alone distinguished them as sage.

Noting that Homer nowhere explicitly calls Ithaca an island, A. E. H. Gøekoop advanced the theory that Homeric Ithaca may in fact have been located on Kephallenia.⁴¹ Both the imposing size of the island of Kephallenia and its natural harbours invite doubts that mighty Odysseus might have remained content for long presiding over the more exposed and considerably inferior island of present-day Ithaca to the east. And if Gøekoop was right, the focal memories of Homer and Pythagoras conveniently assume a signal relation to a common locale intimating “head” or “height” (not unlike the prefix ‘ari-’ in ‘aristocracy’).

The distinction of the terms ‘Kranion’, ‘Calvaria’ and ‘Gulgota’ with respect to the lunar significance of the crucifixion and interment of Jesus (‘skull’ as *buried* faces or phases), is intriguingly augmented by Edmund Wilson:

“Allegro, for example, had made a good deal of what he calls ‘a little document’ in which, he says, occurs a Semitic word which must underlie the significant name Cephas given by Jesus to Simon Peter. (*Kefa*, the Aramaic for *stone*, is translated into Greek as *πετρος*.)⁴² “The Essenes,” says Allegro, “deemed it a rather ‘special’ word, since it signifies one having the ability to read men’s minds through their faces.” Therefore, Peter is an Essene ‘overseer,’ and he is the first to recognize Jesus as the Messiah.” [WILSON, *The Dead Sea Scrolls 1947–1969*, p166]

In otherwords, *kephalo* in Greek which means “head”, may be equated with the Aramaic for “stone”. And a stone which enables one to “read faces”, clearly conforms to the presentiment of the gnomon-stone erected to measure time – signal blazon of the putative lunar priesthood or ‘veristocracy’, that intrusive ‘elite’ conspicuous to history through such consonant nominations as: the Kaviroi or Kabeiri (secret society of the Caucasus and Anatolia); the

41 GØEKOOP, *Ithaque la Grande* (1908: Athens) – belatedly translated into English by Wim Bras, Harold van Garderen and Manolis Pantos (1995)

42 *petros*: a stone – Calvaria, Gulgota – conspicuous in detecting ‘Christ’s’ absence (*ie*, no phase)

Khabiru or Habiru of Abram in Canaan; Pharaohs Khufu (Hwfw or Cheops) and Kha-f-Ra (Khafre or Chefren) of Egypt; and the Keftiu (Egyptian designation for the Cretans), to name the most prominent. The common prefix *kepha* returning us inevitably to Kephallenia.

Coins from Kephallenia (ca 450 BC), bearing initials Η for Hemibol on one side, κ for Kranion⁴³ on the other, conveniently supply a Pythagorean etymon for the name of the place where Jesus was reportedly crucified. Since the Essenes were known to Josephus as Pythagoreans, this substantiates to some degree, the speculation that Jesus may have been an Essene (and thereby a Pythagorean).⁴⁴ It also fortifies the association between the terms *kepha* and *kranion*.

That Kephallenia was a focal Pythagorean enclave may be attested by: the colony established by Ancæus on Samos where Pythagoras was reputedly born; and the relocation of the famous school of Pythagoras almost directly across from Kephallenia at Croton, Italy. Fessenden identifies this school as a remnant of the Kabeiroi of Elysion (cf, Sion) driven from the Caucasus Valley sometime around 600 BC – or about the time that Pythagoras appeared. It also bears noting that, following his 38 years abroad, Pythagoras reportedly returned to Samos at the age of 56 – recalling the signal lunar measure of the nodal regression round.

43 Kranion (also Crane or Cranii) was a town at the western extremity of the natural harbour on the south side of the island of Kephallenia

44 Their calendar is conventionally identified solely as a sun calendar, despite the fact that a year divided into months is properly described lunisolar, or that the Essenes observed a 49-year cycle (7 ‘weeks’ of years): “The Essene sect had a special calendar which differed from the traditional Jewish one. This was solar, and based on a year of twelve months of thirty days each, with an extra day at the end of every quarter [364]. Each Sabbath had its own sacrificial hymn, supposed to be recited in rotation by seven “chief princes,” who are thought to have been archangels of the kind that the Essenes so prominently featured.” [WILSON, *The Dead Sea Scrolls* 1947–1969, p210]

DICTYNNA IS IDENTIFIED as the daughter of Zeus and Karne (daughter of Euboulos son of Karmanor and Demeter). Karmanor, according to Pausanias, purified Apollo after he killed the Pytho. Another source makes Britomartis or Dictynna the daughter of Phœnix (son of Agenor, and thereby a brother of Europa and Cadmus) and Kassiopeia (daughter of Arabios).

Carmanor – styled variously by Graves a “servant of the moon-goddess Car” and “a title of Adonis”⁴⁵ – is identified as a son of Dionysus and Alexirrhoë.

The conspicuous lunar aspect of Car, Carmanor and Karne lends further insight to the nature of the temple on Mount Carmel to which Pythagoras retreated before proceeding to Egypt. It bears repeating that the Hebrew word *karmel* signifies “garden land” or “fruitful land” consonant with the Garden of the Hesperides (the 28 daughters of evening who clearly represent the phases of the moon). Mount Carmel is further situated not 35 miles south of Tyre in ancient Phœnicia, home of Agenor’s offspring Europa and Cadmus (*cf.* ‘Carmus’).

Europa, spirited across the sea on the back of Zeus disguised as a white bull (with a telltale black streak between his horns – the dark interval between waning and waxing crescents), was set ashore and ravished by her captor (transformed into an eagle), at Gortyna in southern Crete. Thus her children by Zeus – Minos, Rhadamanthus and Sarpedon – were conceived at the place where Britomartis or Dictynna reigned as moon-goddess. “According to Hesychius (*sub* Carten), ‘Gortys’ stands for *Carten*,⁴⁶ the Cretan word for a cow”.⁴⁷

45 GRAVES, *The Greek Myths*, pp755/528

46 the likelihood that the word ‘Crete’ is cognate with ‘crescent’ is here fortified by its relation to *carten* – bull as lunar symbol: its horns represent waning and waxing crescents – the island of Crete emphatically bovine, to judge from the frescoes of bull-leaping youths and bull-mating myths (compounding the legend that the alphabet – meaning “house of bull” – was reputedly imported to Thebes by Cadmus during the search for the moon-goddess Europa, his sister, taken by Zeus as a white bull: *alpha* = *alba*)

47 GRAVES, *op cit*, p297

Dictynna, likewise fathered by Zeus on Karme at Kaino Crete, was later pursued by Minos tirelessly for nine months before leaping into the sea and being rescued in the net. If we allow that she was the daughter of Phœnix, Minos would have been her first cousin. The lunar resonance of Karme is compounded by the obsession of Minos with one moon-goddess (Dictynna) while married to another (Pasiphæ; whose name “according to Pausanias [III. 26. I], is a title of the Moon”),⁴⁸ not to mention his own lunar / bovine beginnings.

While Robert Graves clearly recognized the lunar focus of innumerable myths, it bears emphasizing that he failed to distinguish the crucial predicate of lunar phases underlying their elaboration, apparently indifferent to the pivotal insight of the moon’s absence from the sky during the two nights and three days separating waning and waxing crescent (which gave rise to the concept of a serpent who dwells beneath the sea, confining, impregnating and ultimately consuming the waning crescent, on the birth of the new moon). As a result, many of his attempts at explaining the myths prove disconcertingly strained.

The suggestion that Britomartis, ‘the lady of the lake’, presents an unmistakable clue to ‘veristocratic’ or Pythagorean diffusion to Britain (not merely an antecedent to Arthurian legends), may be supported by a reading of the myth of the arrival of Brutus, in relation to her Cretan derivations. According to Geoffrey of Monmouth, Brutus is directed by Diana, a moon-goddess, “beyond the setting of the sun, past the realms of Gaul [to] an island in the sea, once occupied by giants [a reference to the builders of Stonehenge]...now empty...a second Troy”.⁴⁹ His audience with Diana occurs on the island of Leogetia,⁵⁰ two days and a night beyond

48 GRAVES, *The Greek Myths*, p297

49 GEOFFREY, *History of the Kings of Britain*, pp46/7

50 NOTE the consonance of Getia (in ‘Leogetia’) and Keftiu – the term used by the Egyptians to refer to Cretans – the island, further, fairly saturated in lunar lore, to present a highly conspicuous seat for Diana (especially for mariners seeking directions); cf, Milesian Gætulia, *Book of Invasions*

the court of Pandrasus (at Athens). Crete appears some 175 miles from Athens, making the speed of their crossing – if the myth refers to Crete – 5 miles an hour (over 36 hours).

Leogetia projects its resonance in the name of Arthur's father-in-law, Leodegan, ruler of the focal city of Carmelide in Britain, and father of Guenevere. And Carmelide, as becomes obvious, echoes Carmel (not to mention Karme and Carmanor). Brutus also put into port at the mouth of the Loire, very near Carnac with its imposing avenues of megaliths extending almost a kilometre – a monumental reflection of moon-goddess Car banked on their erection.

Finally hearken back to Erichthonius the product of premature ejaculation from Hephæstus against Athena's thigh, glancing to fecundity in the bountiful folds of Gaia's unguarded womb. The child was given by Athena to Aglauros⁵¹ (eldest daughter of King Cecrops of Athens, Gaia's son), whose youngest sister Herse became the mother of Cephalus after Hermes had his way.

Thoth god of the underworld – the Egyptian equivalent of Hermes⁵² – was credited with the invention of writing and 'just measure'. 'Hermes' means "pillar", summoning an image of the gnomon-stone facilitating apprehension of *stoicheia* (a series of *elemental* characters comprising the alphabet). Thus it is the son of the inventor of letters – Cephalus ("head") – who is memorialized as having taken possession of Kephallenia. Which strongly suggests that the island may have been focal to an alphabet cult concerned with 'just measure' (*cf.* Pythagoras).

- 51 her mother Agrauros illustrating that metathesis signifies a *relation* of counterpoints: as in the complementary realms – or streams – of Okeanos
- 52 Hermes is considered one of history's five great *magicians* together with "Persia's Zoroaster, Rome's Numa Pompilius, Thrace's Zalmoxis, [and] Babylon's Buddha" – *magi* (Persian); *sapientes* (Latin); *philosophes* (Greek); *Brachmanes* (Indian); *gymnosophistes* (Indian); *Chaldaeos* (Babylonian); *Drydas* or *Druids* (Celtic); *sacerdotes* (Egyptian); *prophetes* (Cabalists) – all presenting ancient antecedents for the term 'veristocracy' [WALKER, *The Woman's Encyclopedia of Myths and Secrets*, p566]

And the third daughter of Cecrops – thereby a maternal aunt of ‘veristocratic’ Cephalus – was named Pandrosos.

King Pandrasus of Athens, the father of Ignoge wife of Brutus, resides further in the name Pandragon, who with the help of Merlin, assumed the likeness of the Duke of Cornwall to ravish the Duke’s wife Ygernia (*cf.* Ignoge), begetting Arthur. The myths seem to be drawing a line not only from Elysion, Samos, Carmel, Crete and Egypt via Kephallenia and Carnac to Carmelide, but also from the moon-goddess (Karme, Europa, Britomartis, Diana) through Cadmus, Cephalus, Pythagoras, Pandrasus, Brutus and Pandragon to Arthur.

The inclusion of Pythagoras in this ‘line’ may not be as incongruous as it might at first seem: aspects of his ‘life’, such as a title for a name (“mouthpiece of the serpent”) and his age on returning to Samos (56, the ‘great year’ interval), suggesting that the influential figure of Pythagoras could in fact comprise a ‘veristocratic’ paradigm – no less than those in whose mythic company he is lumped. The fantastic accounts of his intercourse with Abaris the arch-Druid – ‘head’ of an arguably co-eval sect devoted to script and measure which likewise failed most conspicuously to leave written records – support the inference.

The date given by Fessenden for the relocation of the Kabeiroi from the Caucasus Valley (around 600 BC) – which coincides with the introduction of the Pythagoreans – moreover, conforms to Velikovsky’s theory of a period during which three extensive cataclysms appear to have rearranged the ancient world (747, 702 and 687 BC).⁵³ The subsequent rise of five ‘new’ religions preserving traces of antecedent beliefs – Zoroastrianism (630); Judaism (586); Buddhism (533); Jainism (sixth C. BC); and Confucianism (520) – supports the possibility that the Pythagoreans represent another of the shards of this arcane tradition cast on the cataclysms into a restored mosaic of esoteric elaborations. Thus the significance behind the recovery of Orphic insights at such ‘veristocratic’ centres as Mt Carmel, Egypt and Babylon before the school of Pythagoras was

53 VELIKOVSKY, *Earth in Upheaval*, pp173–6

removed from Samos (via Sparta, site of the Orphic oracle of Demeter Chthonia, and temple of Artemis / Britomartis where the moon-goddess was memorialized as 'Lady of the Lake') and returned westward near the ancestral outpost of Kephallenia, to Croton.⁵⁴

NOTE Anax king of Anactoria (or ancient Caria) and father of the giant Asterius proves not only cognate with Anak father of the giants – the Amalekite, Hittite, Amorite, Jebusite and Canaanite identified as their descendants – known collectively as the Nephilim (*cf.* Rephaim)⁵⁵ but also with Enoch eldest son of Cain and founder of the first city, which was named after him (*cf.* Anactoria). And Enoch is cognate with Enki, Sumerian elemental god of water and god of wisdom, reflected further in Enoch the descendant of Seth, credited with the invention of writing (to transmit the divine – *ie*, lunar – revelations he received).

The giants were the offspring of the Watchers (or lunar priests) and the daughters of men – the earliest descendants of those who had recognized the origin of conception from their study of lunar cycle. Their colonies reportedly dominated Palestine when 'Abram' and the Habiru arrived from Ur. A calendrical sect identified as giants because they had divined their insights by tracking the cycle of the moon with megaliths – men who were apparently tall enough both to erect the giant stones and to have the gods 'whisper the secrets in their ear'. The Habiru, in contrast, represent a subsequent sect which had perfected a measure that better rationalized lunar and solar cycle (the *octaeteris*).

Thus the myth of Miletus son of Apollo removing from Crete to displace the descendants of giants, appears to acknowledge the existence of similar colonies in Anatolia – such as the oldest excavated city of Çatal Hüyük (6500–5600 BC). And the name of Anak's kingdom – Anactoria – proves suspiciously consonant with Anatolia (preserving further resonance with Çatal Hüyük – 'atal-huyu'). The son of Anak – Asterius the giant – moreover, had a name-

54 *Croton* = "mouth of the dead" (*cf.* 'mouth of the serpent')

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sake in Crete (the husband of Europa), intimating that the original Cretans were likewise Enochorians.

Miletus, it bears noting, was home to the first philosophers – Thales and Anaximander (*cf.* Anax) – whose opposing ontological views (DYNAMIC THEORY OF PRIMAL MATTER: a single mutable element – ‘behind multiplicity is unity’ – *vs* MECHANIC THEORY: innumerable elements interacting) were effectively combined in the teachings of their illustrious pupil, Pythagoras of Samos (‘the one and the many’). His descent from the chthonic Watchers is memorialized in the Philosopher’s Stone, a figurative survival of the ‘veristocratic’ megalith.

The Egyptians identified the Watchers as Urshu who originated in Ta-Ur (*cf.* Taurus Mountains) – both terms incorporating the conspicuous morpheme denoting ‘city’. And although the rise of the original city-culture – as propounded in *God’s Wand* – may be located in the Caucasus isthmus, it bears noting that the colonial outpost in Anatolia known as Çatal Hüyük, also appears to present a signal compound of Ta-Ur.

Which brings us back to Ancæus the Lelegian and counterpart to his fellow Argonaut, Ancæus of Tegea. Ancæus is said to have established the colony of Cephallenia on Samos, the northernmost island in Caria. The Leleges were identified by Pherecydes of Leros as the aboriginal Carians whose territory included Samos, Miletus and Leros. Yet the myth of Miletus identifies the autochthonic Carians as the giant Anactorians.

The name ‘Ancæus’, it should be abundantly evident, expands that of the giant king, Anak – the Watchers and their colossal offspring clearly seminal to the islands of Samos and Kephallenia (not to mention Crete). ‘Car’ in ‘Caria’ signifying “moon-goddess”, it should be even harder to avoid pursuing the Pythagorean secrets inland to the illuminated shrines of Çatal Hüyük (north of the Taurus Mountains) and beyond to the rugged cradle of the mighty Caucasus.

THE QUIBERON PENINSULA across from Locmariaquer, Brittany in northwestern France, harbours a number of menhirs from which ancient astronomers sighted celestial phenomena. Their foresight, the Grand Menhir of Er Grah, towered above the mainland to the east an incredible sixty feet (the largest megalith in Europe).⁵⁶ While the Carnac alignments – row on row of standing stones extending more than a kilometre⁵⁷ – flank the massive foresight some 10 km further west.

As noted (p74, fn197), Carnac in Brittany and Karnak at Thebes in Egypt, are both pre-eminent sacred sights: the former unrivalled for its concentration of megaliths; the latter (with Hypostyle Hall abounding in massive pillars) “the largest place of worship in the entire world”.⁵⁸ Yet the Quiberon Peninsula likewise resounds the name of an ancient eastern priesthood: the Kabeiroi, Khabiroi or Cabiri – cf, Abaris the Druid – of the Black Sea (*see* pp219/20).

Across from Croton Italy (where Pythagoras relocated his school of Kabeirean precepts) the city of Pyrgos rises on the west coast of the Peloponnese surveying the peninsula of Katacolon – like Carnac and Locmariaquer overlooking Quiberon. The word for ‘tower’ in Greek is *pyrgos*; while *katacolon* signifies a ‘remote’ or further ‘column’ – hindsight and foresight summoning the antecedent of the obelisks erected in pairs along the Nile. Which appears to connect the disparate threads of the Egyptian and Kabeirean priest-hoods to Pythagoras, the Peloponnese and Carnac (as well as Éire [cf, p142] and Albion, the sanctuary of Stonehenge).

⁵⁶ “The Great Menhir was over 60 ft (18 m) high, three times the height of the largest menhirs usually found and almost twice as high as the next tallest, that of Plouarzel...[and] must have weighed about 340 tons.” [SERVICE & BRADBERRY, *The Standing Stones of Europe*, pp58/60]

⁵⁷ “Carnac, on the south coast of Brittany, is the greatest centre of megaliths in the world....It may be that the small town of Carnac is one of the oldest continuously inhabited places in the world.” [SERVICE & BRADBERRY, *op cit*, p47]

⁵⁸ MOKHTAR, *Thebes of the Hundred Gates*, p13

PI THE 16TH LETTER – the square [II] – was employed by the ‘veristocrats’ to signify the second night of full moon because the second full moon occurs on day 16 in the lunar cycle – 16 representing both the area and perimeter of a perfect square whose sides are each 4 units. The side of 4 units – taken as the diameter on which this square may be said to have been constructed – bisects a circle (signifying both the first night of full moon in the lunar cycle, on day 15; and the 15th letter in the alphabet: o) whose circumference may be computed as 4×3.14 (diameter $\times \Pi$) = 12.56. While the area of the circle ($\Pi r^2 = 3.14 \times 2^2$) also amounts to 12.56 – resounding the equivalence in area and perimeter of the perfect square. The figure 12.56, moreover, divided into 365.25 (days/year) produces a quotient of 29.08 (days/lunation) – 29.06 when divided into 365 – preserving the divine ratio of lunisolar measure: 12.56 ‘months’ of 29 days producing a ‘year’ of 364.24 days, requiring but a single intercalary day to rationalize it with the solar year (365.2422 days). Thus the 91-step four-sided pyramid (*cf.* *pi*-ramid – $3.14 \times 29 = 91.06$, representing the quarterly ‘season’) – such as the one at Chichen Itza (432 AD) – which incorporated a platform at the top to accommodate a day of ‘worship’ to round out the year ($4 \times 91 = 364 + 1$).

NOTE that the 12.56-month annual cycle theoretically requires 100 years to realize a recurrence of ‘phase’ and date – *ie*, have the year begin again on the first day of the month (*cf.* Argus). While eight such 12.56-month ‘years’ comprise 100.48 29-day ‘months’. Thus it may be seen that the more practical 8-year 99-month calendar of Abram (who added the eighth letter to his name in his 99th year to assume the form ‘Abraham’) justified the theoretical measure of the ‘veristocrats’ at the critical eighth year. This so-called *octa-eteris* measure of five 12-month plus three 13-month years (comprising 49 months of 29 days [1421] plus 50 months of 30 days [1500] yielding a cycle of 2921 days) required far less adjustment – the synodic equivalent for eight years

amounting to 2923.5282 days (29.530588×99) while the solar equivalent encompasses 2921.9376 days (365.2422×8). The principal of the *octaeteris* (like the successive *ennea-decateris* or nineteen-year calendar) was predicated on the ‘marriage’ of 29-day (male) and 30-day (female) months – giving rise to the mnemonic of the Danaïds – the even month pursued by the odd.

REGENTS OF THE ALPHABET

DAY	LUNAR PHASE	OLYMPIAN	EGYPTIAN	LETTER	
1	<i>no moon</i>	ARTEMIS	ISIS	A	1
2	<i>no moon</i>		NEPHTHYS	B	2
3	<i>waxing crescent</i>	ARES	HORUS	C	3
9	<i>waxing half-moon</i>	HERMES	THOTH	Θ	8
15	<i>first full moon</i>	APOLLO	AMON	O	15
16	<i>second full moon</i>	ZEUS	RA	Π	16
17	<i>first waning</i>	POSEIDON	SET	Q	17
23	<i>waning half</i>	HEPHÆSTUS	PTAH	X	22
29/30	<i>crescent</i>	HADES / PLUTO	OSIRIS	double	

NOTE that the third letter in Greek is *gamma* Γ (in Hebrew *gimel*); while *theta* in Greek is currently the eighth letter (and *teth* in Hebrew, presently ninth). Also the first two – in Greek, *alpha* and *beta*; and Hebrew, *aleph* and *beth* – were originally drawn on their side as if opening onto or ‘sighting’ the horizon – *alpha* (connoting “white” as in *alba*, and “high” like *Alps*) a vertex of sight-lines struck through with a cross-stroke or cancel to depict the first night of no visible phase; *beta*, a doubled vertex of sight-lines crossed out to represent the second night of no visible moon. In Phœnician inscriptions these characters lay to the right or north-east of the plane of the writing surface; in Greek, left or north-west. It should be appreciated that the inversion of character forms in these variant alphabets preserves a conceptual distinction – the Phœnician viewed from the ground, the Greek from the prospect of the moon herself, as in heraldry (*sinister* “left”, divined like script, from *Sin*).

MEASURES

μηδεις αγωμετρητοζ εισιτω μον την στεγην

18.61-YEAR 230-LUNATION 6792-DAY NODAL CYCLE

29.530434 (6792 ÷ 230) *average lunation*
18.61 round years → 18 years 218.875 days
[365.2422 days × 18.6 years = 6793.5049 days] *solar-1*
[365.2422 × 18 (6574.3596) + 218.875 = 6793.2346 days] *solar-2*
365 × 18.61 round years = 6792.65 days (*solar-3*)
[365 × 18 (6570) + 218.875 = 6788.875 days] *solar-4*
[6793.5049 ÷ 29.530588 = 230.04976] *lunations-1*
[6793.2346 ÷ 29.530588 = 230.04067] *lunations-2*
6792.65 ÷ 29.530588 = 230.02081 (*lunations-3*)
[6788.875 ÷ 29.530588 = 229.89298] *lunations-4*
6793 – 460 = 6333 traceable courses completing the course cycle
230 lunations × 29.530588 days = 6792.0352 days (*synodic*)
6792.65 & 6792.0352 → 6792 (*solar-3* & *synodic*) rounded

56-YEAR 690-LUNATION 20,376-DAY NODAL ROUND

29.530434 (20,376 ÷ 690) *average lunation-7*
[55.83 years (18.61 × 3) → 56 round years]
[6793.5049 days × 3 cycles = 20,380.514 days] *solar-1*
[6793.2346 days × 3 cycles = 20,379.703 days] *solar-2*
[6792.65 days × 3 cycles = 20,377.95 days] *solar-3*
365 days × 55.83 round years = 20,377.95 days (*solar-3*)
[365.2422 days × 55.83 years = 20,401.51 days] *solar-4*
[365 × 56 = 20,440] *solar-5*
[365.2422 × 56 = 20,453.563] *solar-6*
[20,380.514 ÷ 29.530588 = 690.14927] *lunations-1*
[20,379.703 ÷ 29.530588 = 690.12181] *lunations-2*
[20,377.95 ÷ 29.530588 = 690.06245] *lunations-3*
[20,401.51 ÷ 29.530588 = 690.86027] *lunations-4*
[20,440 ÷ 29.530588 = 692.16366] *lunations-5*
[20,453.563 ÷ 29.530588 = 692.62295] *lunations-6*
[29.530588 × 691 = 20,405.635 days] *lunations-8*
[55.83 years × 365 days = 20,377.95 days] *solar-3*
690 lunations × 29.530588 days = 20,376.105 days (*lunations-7*)

NOTE the difference between 56 years (20,453.563) and three nodal cycles or 55.83 years (20,401.51) is 52.053 days. But the cycle of nodal regression was observed by those who set their calendar year at 365 days, making the difference between 56 (20,440) and 55.83 (20,377.95) of their years, 62.05 days. Which appears to be 3 days more than two lunations (62.05 – 59.061176 = 2.98824).

The actual measure of nodal regression has been computed as: $(27.32166 \times 27.21222 =) 743.48302 \div 0.10944 = 6793.5217$ – which represents the length of the sidereal month (*ie*, the recurrence of a phase measured from fixed star to fixed star) times the length of the draconic month (*ie*, the return of the moon to the node on the ecliptic; which signifies the point where the orbital planes of the moon and the earth intersect) divided by the difference in length between sidereal and draconic months.

“To get an eclipse, Earth, the Moon, and the Sun must be very close to collinear, and thus the Moon must be at a node...the draconic [or nodal] month is shorter than the sidereal month by 0.10944 days and the node of the lunar orbit moves clockwise or *regresses*, taking $27.32166 \times 27.21222 / 0.10944$ days, or close to 18.6 years, to complete a rotation.” [STEEL, *Marking Time*, p392]

Dividing the length of a nodal regression cycle (6793.5217 days) by 365 produces a quotient of 18.612388 years; but when you employ the figure representing an actual solar year (365.2422) the quotient becomes 18.600045 years.

The cycle (6793.5217 days) divided by the length of a lunation (29.530588) produces a quotient of 230.05033 synodic lunations – an interval embracing 249.64966 draconic lunations ($6793.5217 \div 27.21222$). The difference in cycle length computed with whole lunations would be (draconic 27.21222×250) 6803.055 minus (synodic 29.530588×230) 6792.0352 equals 11.0198 days.

Multiplying the cycle (6793.5217 days) by 3 produces a product of 20,380.565 days or 690.151 lunations – which equals 55.837164 365-day years or 55.800137 solar years of 365.2422 days.

The question remains, what did the lunar priests observe every 230 lunations which led them to sanctify this measure? Gerald S. Hawkins claimed that it was a lunar eclipse sighted over the heel-stone at Stonehenge (which would require the moon at the node, as noted above). Using a computer and “the standard text on the subject of early eclipses, Van den Bergh’s *Eclipses in the Second Millennium BC*, to find the months in which eclipses of sun or moon had taken place” he determined “that an eclipse of the moon or the sun *always* occurred when the winter moon – that is, the full moon nearest the winter solstice – rose over the heel stone”. [HAWKINS, *Stonehenge Decoded*, p176]

“In a cycle of 18.61 years, the midwinter full moon moved from maximum north, declination $+29^\circ$ at stone D, across the heel stone to minimum north, declination $+19^\circ$ at stone F, and back again.... The interval between the nights of winter moonrise

over the extreme line centre-D was about 19 years. But ‘about’ is not ‘exactly’. In this case ‘about 19’ meant almost exactly 18.61 – which meant that instead of the intervals between winter moonrises over D being a comfortable continuing series of metonic cycle 19 years [*sic*], they came in a jumble of 19s and 18s, averaging two 19s to one 18...which in turn meant that if the priests, intently tracking the years so as to be able to predict eclipse danger, had used a simple 19-year interval, they would have been right for perhaps two intervals, and then after a third would have been off by a full year. A rigid 19-year cycle would have soon drifted into hopeless error. The only regular-interval alternative, an 18-year cycle, would have been twice as bad. The smallest time unit that would have remained accurate for many years would have been the triple-interval measure, $19 + 19 + 18$, or a total of 56 years. Our graph showed that Stonehenge moon phenomena repeated every 56 years with good uniformity. The triple-interval of 56 years between winter moonrises over Stone D was accurate for centuries.” [HAWKINS, *Stonehenge Decoded*, pp176/7]

Thus Hawkins solved to his satisfaction the mystery of the early circle of 56 so-called Aubrey holes at Stonehenge which arguably served as a computer to track this protracted cycle.

So, although the nodal regression cycle extending 230 synodic lunations embracing 6792 days is protracted through 3 cycles to 690 lunations comprising 20,376 days, the ancient lunar priests employed a 56-year measure of 20,440 days (56×365) to compute the sacred course cycle. And because 3 celestial nodal cycles are exactly 20,380.565 days (690.151 lunations) the difference between the priestly full-year measure and the actual count amounts to ($20,440 - 20,380.565 =$) 60.565 days, or one and a half days more than two lunations ($29.530588 \times 2 = 59.061176$).

Which presents an expedient measure for adjusting the count every fifty-sixth year. Or in otherwords, a new 56-year nodal-cycle round would already be two lunations old at the start of year 57. That is, observing a calendar year of 365 days.

“In retrospect we can say that there are flaws in Hawkins’s interpretation of the use of the Aubrey Holes. The 56-year period is not an eclipse cycle, and though eclipses can repeat on the same day after 18 years, they very rarely do so twice, and never three times.” [wood, *Sun, Moon and Standing Stones*, p13]

Fred Hoyle thought that the 56 Aubrey holes may have been conceived as “a large protractor, or instrument for measuring angles.... [The astronomer-priests] would move the sun marker

round anticlockwise two holes every thirteen days so that it did a full revolution in the year [$56 \div 2 = 28$; $28 \times 13 = 364$]. They would move the moon marker anticlockwise two holes each day, so that it completed its circle in twenty-eight days.... The real problem is to place correctly two more stones which represent the positions where the moon, in its orbit round the earth, crosses the path that the sun traces out in the sky during the course of the year. These two markers, which we shall call the nodal markers, have to be moved clockwise three holes each year [$56 \div 3 = 18.666$ or 18 and two-thirds times]. When the sun and moon markers are exactly opposite each other, and the two nodal markers are on the same Aubrey Holes as the sun and the moon, there will be a lunar eclipse." [WOOD, *Sun, Moon and Standing Stones*, p16]

"While the movements of the sun as seen from the earth are fairly simple, the movements of the moon are very complicated. The moon goes round the earth in the same direction as the earth goes round the sun.... The plane of its orbit is neither the plane of the celestial equator nor the plane of the earth's orbit, but at an angle of 5.14° to the latter. The moon crosses the plane of the ecliptic twice a month, and the two points where the orbits intersect are called the nodes of the moon's orbit." [WOOD, *op cit*, p66]

The tilted lunar orbit means that the moon will appear to rise higher in the sky when at its maximum orbital inclination to the celestial equator, and lower at its minimum. And because the earth's polar axis is tilted 23.5° off its orbital plane about the sun, the sum of these tilts varies dramatically – from $\pm 29^\circ$ to $\pm 19^\circ$.

"There is however, a vital complication: the plane of the moon's orbit also rotates. The line of nodes makes one revolution every 18.6 years.... The time when the moon is swinging its farthest is called the major standstill, because the moon reaches about the same maximum height in the sky every month for something like three years. At the major standstill the moon's movements are at their most dramatic. Not only does it reach its highest possible elevation each month, but two weeks later it is very low in the sky, and barely rises in the high latitudes of the Shetland Islands. These movements would have been very conspicuous to early man.

"Just over nine years after the major standstill, the moon's orbit has completed a full half turn and the monthly oscillation in declination will be much smaller: from about 19° north of the celestial equator to 19° south. At this time the moon is said to be at the minor standstill, because once more it reaches approximately the same height in the sky for months on end. From the observer's

point of view its movements are now far less dramatic than at the major standstill. Its maximum height in the sky is about 10° lower at this time, and its minimum height is 10° higher, so it does not show such a wide swing in its monthly movement.” [WOOD, *Sun, Moon and Standing Stones*, pp68/9]

Eclipses occur when sun, earth and moon are in a straight line in the sky, and the moon is at or near a node during either full or new moon. But because the terrestrial and lunar diameters are so great the period of occlusion may extend 17 days from the moon’s arrival at the node (during full or new moon) – or 34 days from approach to remove (an eclipse ‘season’).

“We have already seen that lunar eclipses occur only at full moon, and the moon has to be close to one of the nodes of the orbit. Since there are two nodes, we have a chance of two lunar eclipses each year, separated by an interval of six months. The 18.6-year rotational period of the nodes is equivalent to an annual drift of about 20° . The sun moves along the ecliptic at a rate of 1° per day (360° in $365\frac{1}{4}$ days), so a change of 20° in the position of the nodes means that the sun will be in the direction of the nodes 20 days earlier each year. (The nodes rotate in the *opposite* direction to the sun’s annual motion.) The effect of the rotation of the lunar nodes is therefore to make the lunar eclipses occur on average 20 days earlier each year.

“This over-simplifies the situation. The length of the month, that is the time from one new moon to the next, is 29.53059 days, and 12 lunar months equal 354.37 days. Twelve lunar months are 10.63 days shorter than one year of 365 days. The eclipses therefore actually recur ten or eleven days earlier each year for a few years, the eclipse missing the node by a few days more year by year, until at last the day of the full moon is too far from the day when the moon crosses the node for the eclipse to occur. There is then a slip of 13 lunar months and the sequence begins again.” [WOOD, *op cit*, p71]

Despite the complications involved in tracking and plotting the sky positions of lunar phases through the 18.6-year cycle (with lunation lengths varying by half a day), some astronomers leave the impression that determining “the month is easy: not only is it relatively brief, but also one can ascertain the Moon’s phase to within a day from simply looking at it” [STEEL, *Marking Time*, p34]. Yet other astronomers like Hawkins, Thom and Hoyle find it unlikely that the 56-unit ancient measure was anything but astronomical: *an interval of time* (like the reign of Nārām-Sin).

8-YEAR 100-MONTH 2912-DAY CALENDAR

$29.12 \text{ (} 2912 \div 100 \text{)}$ *average lunation*
 $[8 \times 365.2422 = 2921.9376 \text{ days}]$ *solar*
 $[29.530588 \times 12.368267 \times 8 = 2921.9375]$ *lunisolar*
 $[100 \times 29.530588 = 2953.0588 \text{ days}]$ *synodic*
 $100 \text{ months} = (4 \text{ years} \times 12 \text{ months}) + (4 \text{ years} \times 13 \text{ months})$
 $88 \text{ months} \times 29 \text{ days} = 2552 \text{ days}$
 $12 \text{ months} \times 30 \text{ days} = 360 \text{ days}$
 $2912 \text{ days} = 2552 + 360$

8-YEAR 99-MONTH 2921-DAY CALENDAR

$29.50505 \text{ (} 2921 \div 99 \text{)}$ *average lunation*
 $[8 \times 365.2422 = 2921.9376 \text{ days}]$ *solar*
 $[29.530588 \times 12.368267 \times 8 = 2921.9375]$ *lunisolar*
 $[99 \times 29.530588 = 2923.5282 \text{ days}]$ *synodic*
 $99 \text{ months} = (5 \text{ years} \times 12 \text{ months}) + (3 \text{ years} \times 13 \text{ months})$
 $49 \text{ months} \times 29 \text{ days} = 1421 \text{ days}$
 $50 \text{ months} \times 30 \text{ days} = 1500 \text{ days}$
 $2921 \text{ days} = 1421 + 1500$

11-YEAR 136-MONTH 4016-DAY CALENDAR

$29.529411 \text{ (} 4016 \div 136 \text{)}$ *average lunation*
 $[11 \times 365.2422 = 4017.6642]$ *solar*
 $[136 \times 29.530588 = 4016.1599 \text{ days}]$ *synodic*
 $136 \text{ months} = (7 \text{ years} \times 12 \text{ months}) + (4 \text{ years} \times 13 \text{ months})$
 $64 \text{ months} \times 29 \text{ days} = 1856 \text{ days}$
 $72 \text{ months} \times 30 \text{ days} = 2160 \text{ days}$
 $4016 \text{ days} = 1856 + 2160$

NOTE eleven years (136 months) + eight years (99 months) = the compound cycle of nineteen years (235 months)

19-YEAR 235-MONTH 6940-DAY METONIC CALENDAR

$29.531914 \text{ (} 6940 \div 235 \text{)}$ *average lunation*
 $19 \times 365.2422 = 6939.6018$ (*solar*)
 $[29.530588 \times 12.368267 \times 19 = 6939.6016]$ *lunisolar*
 $235 \times 29.530588 = 6939.6882$ (*synodic*)
 $235 \times 29.531914 = 6940$ [Meton's measure]
 $[603.550 \div 6940 \text{ (} 235 \times 29.531914 \text{)} = 86.966858]$
 $[603.550 \div 6939 \text{ (} 235 \times 29.527659 \text{)} = 86.979391]$

$$[60 \div 19 = 3.1578947368]$$

$$[21,900 (60 \times 365) \div 6936.585366 = 3.1571729957]$$

$$[470 \text{ years of Israelite absence from Canaan} = 2 \times 235]$$

$$235 \text{ months} = (12 \text{ years} \times 12 \text{ months}) + (7 \text{ years} \times 13 \text{ months})$$

$$110 \text{ months} \times 29 \text{ days} = 3190 \text{ days}$$

$$125 \text{ months} \times 30 \text{ days} = 3750 \text{ days}$$

$$6940 \text{ days} = 3190 + 3750$$

NOTE that the phases of the moon repeat on the same day after 19 years (phase cycle); while the 18.6-year nodal regression cycle (course cycle) completes the course the moon takes through the sky during a circuit of the nodal line (*ie*, the nightly track from rise to set – a serpentine sequence of widely variable meanders which recurs every 18.6 years). The Metonic calendar comprises months; the Metonic cycle, lunations. [*cf*, MAIR, *Aratus*, p205]

19-YEAR 235-LUNATION METONIC CYCLE

$$19 \times 365.2422 = 6939.6018 \text{ (solar)}$$

$$235 \times 29.530588 = 6939.6882 \text{ (synodic)}$$

$$[6939.6882 - 6939.6018 = .0864]$$

$$[.0864 \times 1440 = 124.416 \text{ minutes}]$$

NOTE that this ‘convergence’ of lunar and solar cycles is merely apparent – the moon requiring 2 hours, 4 minutes and 25 seconds (124.416 minutes) longer to complete its cycle than a compound of 19 solar years. An undetectable discrepancy without advanced instruments, however, given the fact that the ‘convergence’ occurs more than halfway through the 6940th day and not at some tidy terminus like midnight (the conclusion of 19 solar cycles on that day, by current reckoning, 2:26:35 PM; and of a Metonic lunar cycle, 4:31 PM – if both cycles *had* commenced simultaneously at the stroke of midnight 6940 days earlier). The moon, of course, being considerably more difficult to detect during the afternoon than at night.

Which leads to a critical insight: if the final phase in the 235th lunation of the Metonic cycle were the second dark night, and the solar cycle were conceived to end on the longest night of the year (winter solstice), ‘convergence’ would not be complicated by such rising or setting disparities. New Year (and a new Metonic cycle) would then begin the day following the solstice, with the appearance of the waxing crescent – concurrent with the rise of the lengthening day of the winter quarter-year advancing toward the vernal equinox.

A mean lunation, it bears repeating, comprises two dark nights, two full moons and twenty-five or twenty-six partial phases. This is because a compound of successive $29\frac{1}{2}$ -day lunations extends 59 days, during which there are four dark nights and also four full moons (leaving 51 nights of partial phases). The ancient lunar priests, therefore, envisioned conjoining lunations as a marriage of male and female months – the male month (beginning on a day) comprising two full moons and twenty-five partial phases; and the female (beginning on a night) embracing two full moons and twenty-six partial phases (because the phase visible on the night of the final day of the male lunation – day 30 – was figured as part of its female adjunct). Twenty-seven visible male phases (conforming with the precept of the gnomon or odd number as a male figure – or erect *member*); and twenty-eight observable female phases (the even interval between pillars conceptually evoking the receptive ordinal). The extra phase naturally nested with the female month as the product of this union.

Another way of looking at it is that a male lunation comprises 30 daytimes plus 29 night-times; while its female counterpart extends 29 daytimes and 30 night-times (dark of night proving the proclivity of the goddess in her underworld realm). And the even presentiment of the 30-phase cycle could be elaborated in a perfect symmetry of dual dark nights opposing twin full moons separated by 13 waxing and 13 complementary waning phases – one preponderant phase greater than the odd 29-phase male cycle; gaining supremacy for the measure of the goddess.

Thus the significance of the Biblical assertion that Eve (*cf.* even) was created from Adam's rib – the male lunation one rib shorter than the female, her extra rib taken from the succeeding month (because the phase visible on Eve's 30th night was also part of the first day of Adam's cycle, making her a creation of his time).

The order of a day considered as night-time plus daytime, the male lunation (opening and closing with a daytime) of necessity projected a staggered (Œdipal) celebration of its phases – waxing crescent rising on the third night-time, for example, being consecrated on the fourth daytime. The female lunation, conversely, began and ended with a night-time.

Yet the phases of the moon were generally depicted as male, while the daylight figured as the period of the goddess (because the moon had made its descent back into her domain). Isis was invoked on the dark nights, but the visible phases of the cycle were personified by the gods – Horus as waxing crescent; Thoth

as waxing half-moon; Amon and Ra as full moons; Set as waning trigger; Ptah as waning half-moon; and Osiris as waning crescent. Their wives – mating the daytime following a god's appearance – embodied progressive manifestations of the goddess.

The first five children of Cronus and Rhea – three daughters and two sons – were consumed by their jealous father before the supreme deity who would displace him, Zeus, was secreted in a cave after birth by his grandmother, to rise as the first Olympian god to take his place on high: waxing crescent of the new moon. His siblings – Hestia, Demeter, Hera, Poseidon and Hades (both males notably *submerged*, in sea and underworld, to sustain the consumption motif) – represent the three days and two nights between waning crescent of the old lunation and waxing crescent of the new, when the moon appears to have been consumed.

19-ECLIPSE-YEAR 223-LUNATION SAROS CYCLE

346.62 days (*eclipse year: return of the sun to the ascending node*)

$19 \times 346.62 = 6585.78$ days = 18 tropical years $11\frac{1}{3}$ days (*solar*)

$223 \times 29.530588 = 6585.3211$ days (*synodic*)

NOTE that *sharu* – signifying “repetition” – forms the basis for the name *Sharru-kin* or Sargon (r. ca 2334–2279 BC), founder of the Akkadian Dynasty in Sumeria, grandfather of Narâm-Sin and the first to introduce the extended 56-year measure of the 18.6-year nodal regression cycle. *Saros*, in this respect, recalling the origin of the ‘great year’ repetitions, in that of Sargon and Narâm-Sin.

25-YEAR 309-LUNATION 9125-DAY APIS CYCLE

29.550339 (9131.055 ÷ 309) *average lunation*

$[25 \times 365.2422 = 9131.055]$ *solar*

$[29.530588 \times 12.368267 \times 25 = 9131.0547]$ *lunisolar*

$25 \times 365 = 9125$ days (*solar*) *rounded*

$309 \times 29.530588 = 9124.9516$ days (*synodic*)

$[9125 \text{ days} \div 309 \text{ lunations} = 29.530744337 \text{ days/month}]$

$9131.055 \text{ days} \div 309 \text{ lunations} = 29.550339 \text{ days/lunation}$

NOTE that the close approximation of the length of a lunation realized with this priestly lunar calendar ($29.530744 \approx 29.530588$: *ie*, merely 13 seconds longer than an astronomical lunation) was achieved only because it was not aimed at rationalizing a whole number of lunations with the solar (365.2422 days) but rather the calendar year of 365 days [see p45]

29-YEAR 358-LUNATION 10,572-DAY ECLIPSE CYCLE

28 years 345 days = 28.944457 years (*eclipse cycle*)
 $(28 \times 365.2422) 10,226.781 + 345 = 10,571.781$ days (*solar*)
 $358 \times 29.530588 = 10,571.95$ days (*synodic*)

50-YEAR 618-LUNATION 18,250-DAY JUBILEE CYCLE

$50 \times 365 = 18,250$ days (*solar*) rounded [18,262.11 days solar]
 $18,262.11 - 18,250 = 12.11$ intercalary days (*solar*)
 $618 \times 29.530588 = 18,249.903$ days (*synodic*)
 $18,262.11 - 18,249.903 = 12.207$ intercalary days (*lunar*)

NOTE that both solar (365-day) and lunar (25-year) calendars require an intercalation of the same number of round days (12) to bring them in line with the actual solar and lunar cycles, every 50th year. The 'great year' measures employed with the 70-year solar and 25-year lunar calendars – the 3950-year Menes and 350-year Mendes cycles restoring lunisolar conjunction – were superseded with the abandonment of the Egyptian 70-year solar calendar, presenting the opportunity for an abbreviated 'great year' measure (which, it may be noted, proves a factor of its predecessors).

70-YEAR 865-MONTH 25,550-DAY BAKH CYCLE

$29.537572 (25,550 \div 865)$ average lunation
 $70 \text{ years} \times 365.2422 \text{ days} = 25,566.954$ days (*solar-1*)
 $[70 \text{ years} \times 365 \text{ days} = 25,550 \text{ days}]$ solar-2 (*rounded*)
 $70 \text{ years} \times 12.368267 \text{ lunations} = 865.77869$ lunations (*lunisolar*)
 $[866 \text{ lunations} \times 29.530588 \text{ days} = 25,573.489 \text{ days}]$ synodic-1
 $[865 \text{ lunations} \times 29.530588 \text{ days} = 25,543.958 \text{ days}]$ synodic-2
 $25,550 \div 29.530588 = 865.20458$ (*synodic*) rounded
 $[603,550 \div 8580 = 70.343822 \approx 22.273 \pi]$
 $[22.273 \times 3.16 = 70.38268]$
 $[22.273 \times 3.14 = 69.93722]$
 $[70 \div 22.273 = 3.1428186]$ ie, a ratio for π

NOTE that the preliminary 70-year sum advanced by Herodotus (p19, fn50) was computed using 360-day years ($25,200 = 70 \times 360$) and that his calculation of 35 intercalary months curiously bears factorial relation to the difference between 70 years of 25,550 days and his preliminary sum of 25,200 (ie, 350 days = 35×10). Taking his measure as a guide, the period intercalated "every other year" would in fact contain only 10 days, which proves to have been the length of the Egyptian 'week'. "The [Egyptian] thirty-day month

was divided into three periods of ten days each.” [BELL, *The Last Problem*, p48] Thus it may be seen that the account of Herodotus, in all likelihood, presents an accurate description of the calendar of the Egyptians, with only the term for ‘month’ at odds (which it appears he may have misunderstood). Ten intercalary days every other year, it bears notice, produces the same sum as five intercalary days every year – which further suggests that the focal interval of the intercalary festival was the ten-day ‘week’. Over 70 years, the 35 ten-day ‘weeks’ incorporate 11 thirty-day ‘months’ plus an additional 20 days. Which may explain a curious fact: “With the exception of $\frac{2}{3}$, for which the Egyptians had a special symbol, every fraction had to be expressed as the sum of a series of fractions having 1 as the numerator.” [NEWMAN, ‘The Rhind Papyrus’ in *The World of Mathematics*, p171] The ‘remainder’ of 20 days equates with two-thirds of a 30-day month; the special symbol denoting the disfigured or uncompleted twelfth ‘month’ of one complete ‘intercalary year’ accumulated every 70 years.

The figure two-thirds is also invoked in the Pythagorean dictum: “Establish the triangle and the problem is two-thirds solved” [PEPPER & WILCOCK, *Magical and Mystical Sites*, p16] – the so-called Pythagorean right-angle triangle with sides of 3-4-5 units (the sum of whose squares on the perpendicular sides is equal to the square on the hypotenuse: $9 + 16 = 25$) disclosing a signal insight. Compounds of *two of the three* lengths ($\frac{2}{3}$) implicit in this figure consistently portend calendrical measure, suggesting that the problem the Pythagoreans were concerned with ‘solving’ involved lunar cycle: $3 \times 4 = 12$ (months); $3 \times 5 = 15$ (day of full moon); $4 \times 5 = 20$ ($\frac{2}{3}$ month); $3 + 4 = 7$ (week); $3 + 5 = 8$ (octave of focal lunar phases – dual dark nights, complementary twin full moons, opposing crescents and opposed half-moons); $4 + 5 = 9$ (night of half-moon).

The lunar aspect of the triangle (*cf.* pyramid) is sustained in another paradigmatic Pythagorean triangle, the sacred *tetractys* – the fourth triangular number – comprised of an equal number of even and odd integers. One dot representing the first, subsequent triangular numbers are produced by appending a line of dots with an additional dot, beneath the preceding line. One plus two produces the second triangular number; one plus two plus three, the third; and one plus two plus three plus four, the fourth. Each triangular number, therefore, is represented geometrically as an equilateral triangle: the first epitomizing a point; the second, a line; the third, a plane; and the fourth, a solid.

The fourth triangular number, the *tetractys*, contains ten dots: an equivalent measure to the 'equilateral' division of the Egyptian month. It also figuratively resembles a half-moon, which falls on the tenth day of lunar cycle (the foundation, as I contend, for the discovery of all measure). The 'tenth' letter of the alphabet – *teth* or *theta* – bears a name almost identical to the Egyptian god of the underworld, Thoth, god of just measure responsible for the invention of script. While the half-moon is clearly identified with the first school of Pythagoras at Samos, known as the *Semicircle*.

"This is the explanation of the language of Pythagoras in the well-known passage in Lucian where the merchant asks Pythagoras what he can teach him. Pythagoras replies, 'I will teach you how to count.' Merchant, 'I know that already.' Pythagoras, 'How do you count?' Merchant, 'One, two, three, four...' Pythagoras, 'Stop! what you take to be four is ten, a perfect triangle and our symbol'." (emphasis added)
[BALL, *A Short Account of the History of Mathematics*, p26]

Two other perfect planar figures likewise distil aspects of lunar cycle: the perfect square with sides of 4 units; and the circle with diameter of 4 units. Both have areas equal to their perimeter or circumference ($4 \times 4 = 4 + 4 + 4 + 4$; $\pi 2^2 = \pi 4$), and both were employed as alphabetical characters (Π and O) to designate the two full moons in each lunation – O , the 15th letter, representing the first full moon which falls on day 15 in the cycle; and Π the 16th letter, signifying the second, falling on day 16. The area and circumference of the circle, moreover, both amount to 12.56 – the precise number of 29-day months in a year less a day ($12.56 \times 29 = 364.24$; requiring but a single intercalary day to complete the solar year of 365.2422 days).

The progression from the Sumerian base-60 to the base-10 number system (and the Egyptian 10-day 'week') arguably had some connection with the *tetractys*. The lunar significance of the number ten (besides being the day of waxing half-moon) may be divined by noting that the first ten prime numbers – 2, 3, 5, 7, 11, 13, 17, 19, 23 and 29 – are all subsumed within the interval of a lunation. Furthermore, the first ten integers except for 7 are all coefficients of the number 360. The first six multiply to produce the sum of 720, the same product for the last three ($8 \times 9 \times 10$); and 720 divided by 6 equals 120, while 720 divided by 3 equals 240 – two quotients whose sum equals 360. In fact 360 is the smallest number divisible by these nine integers. Ancient mathematicians who may have discovered this fact would immediately have had

their attention drawn to the enigmatic number 7 (which happens to recur repeatedly throughout the pages of *Gilgamesh*).

"The number seven held special awe for the Pythagoreans: it was the number of the seven planets, or 'wandering stars'."
[ACZEL, *The Mystery of the Aleph*, p16]

"The seven sacred vowels – alpha, epsilon, eta, iota, omicron, upsilon, omega – were recognized as having some fundamental relationship to the seven planets, and the names of God were believed to be formed from combinations of these seven planetary harmonies." [PEPPER/WILCOCK, *Magical & Mystical Sites*, p22]

The figurative *tetractys* comprises four graduated rows which contain a total of ten dots. The *tetragrammaton* – $\Upsilon\text{H}\text{W}\text{H}$ – is composed of four letters which permute into ten combinations: the *sephiroth* ("countings" of the 'name' of God) of the Kabbalah. The letters of the *tetragrammaton* – *yod*, *heth*, *vau*, *heth* – equate with Greek vowels – *iota*, *eta*, *omega*, *eta* – which conjure the later elaboration of the *tetragrammaton* in the five secreted vowels of the Boibel-Loth calendar – IEUOA – representing a single intercalary day to end the 364-day year (see p53, fn155).

Numbering the dots in the *tetractys* with the letters of the *tetragrammaton* produces a signal convergence: the first dot equated with *yod*, the tenth letter (the apex representing the sum of all the dots in the *tetractys*); the second row of two dots and the fourth row of four dots allowed to retain their ordinals as factors of the eighth letter *heth* (because it appears twice: $2 \times 4 = 8$); and the third row of three dots allotted the number 6 for the sixth letter *vau* (which comprises both the product and the sum of the first three rows: $1 \times 2 \times 3 = 1 + 2 + 3 = 6$, the first perfect number – complementing the perfect planar figures of lunar significance, the square and circle noted above). [The next perfect number (28) adds three more rows of dots to the *tetractys* ($5 + 6 + 7$) effecting a figurative symmetry with the first three rows.]

In otherwords, the Pythagorean *tetractys* of the sixth century BC, appears to incorporate the Hebrew *tetragrammaton* which is not encountered before the Mosaic narratives (concealing, as I contend, a cryptic reference to the Metonic cycle which first appears on the record late in the fifth century BC).

[NOTE that while various sources give the spelling of the 'name' $\Upsilon\text{H}\text{W}\text{H}$ as *yod-he-vau-he* (*he* being the fifth letter) it is depicted twice in a reproduction from the Isaiah Dead Sea Scroll with four clear samples of the letter *heth*. — *New Bible Dictionary*, p1177]

The 25-year lunar and 70-year solar rounds of the Egyptians, it should be noted, achieve congruency every 350 Egyptian years (or 127,750 days: $14 \times 9125 = 5 \times 25,550$). As I have shown (p45) the Narmer mace-head preserves an early awareness on the part of the Egyptians, of the discrepancy between their 365-day solar measure and the actual solar year, amounting to roughly 960 days every 3950 years (the same discrepancy between their 25-year lunar measure of 9125 days projected over a 3950-year period, and the sum of 3950 solar years: $3950 \times 365.2422 = 1,442,706.6$; $9125 \times 158 = 1,441,750$; $1,442,706.6 - 1,441,750 = 956.6$). And these two different conjunction measures – 350 and 3950 years – prove to be commensurate: 3950 years incorporating eleven 350-year intervals plus 100 years.

Suggesting that the cumbrous 3950-year convergence period may have been superseded by the more manageable 350-year interval, requiring the intercalation of 84 days (or twelve 7-day weeks) every 350 years to make up for the difference between the expedient calendrical measures and the true intervals of celestial mechanics – *ie*, once the 7-day week was introduced. Leaving a discrepancy of $\frac{3}{4}$ day using the solar measure ($350 \times 365.2422 = 127,834.77$ or 84.77 days more than the 127,750-day sum of the 365-day calendar through 350 years); and just under a day and a half using the lunar ($127,834.77 \div 29.530588 = 4328.8934$ lunations or 2.8934 lunations more than the 25-year 309-lunation measure over a period of 350 years, which is 85.443803 days or 1.443803 more than the 84 days intercalated). Every 30 years for 11 rounds, a week would be added, followed by a final week 20 years later – *ie*, two-thirds [$\frac{2}{3}$] the usual intercalation period – a total of twelve 7-day weeks over 350 years.

Note that this is the second intercalation involving the figure $11\frac{2}{3}$: the 35 ten-day ‘weeks’ intercalated (one every other year) through a 70-year period of 360-day years, which amount to $11\frac{2}{3}$ thirty-day ‘intercalary months’ – to reconcile the year of twelve 30-day months with the Egyptian measure of a 365-day solar year (cited by Herodotus, *ca* 450 BC); and a 7-day week intercalated every 30 years through a 350-year period, with the addition of the final (or twelfth) week occurring after 20 years – to reconcile the 365-day year with the actual solar measure of 365.2422 days.

It bears noting further that the two-thirds measure – pivotal enough for the Egyptians to warrant the only special symbol among their fractions – was likewise focal to the employment of the 56-hole Aubrey circle at Stonehenge, as shown by Fred Hoyle,

in tracking the 18.6-year nodal cycle by advancing a marker three holes per year ($56 \div 3 = 18\frac{2}{3}$). [see p250]

It also forms the basis of the Mayan Haab or solar calendar of eighteen 20-day intervals – the period of ‘two-thirds of a 30-day month’ adopted as a base measure arguably to avoid the untidy intercalary remainder of the 70-year ‘great year’. Supporting the hypothesis that the enigmatic architects of Teotihuacan were at least familiar with the Egyptian ‘great year’ measure – while the five-day intercalation period in their calendar year dismisses the likelihood, in my estimation, that a putative diffusion from the Mediterranean involved Phœnicians (whose observance of the Set/Dan measure bound them to a single intercalary day).

Their resort to dual calendars further summons the Egyptian model of calendrical measure – though the ‘Mayan’ refinement of a 52-year ‘great year’ cycle effected a successful convergence of the calendars, without producing fractional intervals: 52 Haab years of 365 days [$18 \times 20 + 5$] = 18,980 days = 73 Tzolkin cycles of 260 days [13×20]. Note that the 20-day interval was the basis for both calendars, and that 52 years proves to be exactly 20 days short of 19,000 days.

From the first pyramid in Mesoamerica (erected by the Olmecs at La Venta near the mouth of the Coatzacoalcos – prime vertex for the debarkation of ancient mariners in the Gulf of Mexico) and the Temple of the Dancers (erected by the Zapotecs atop Monte Albán further west, in Oaxaca) to the earliest temples of Teotihuacan in the north and even legendary Aztlan (“place of whiteness”) of the Aztecan Mexico, calendrical measure together with iconography and script suggest a diffusion of lunar priests seeking refinements in their comprehension of the cycle of the ‘dancers’ or ‘shape-shifters’ (*nahual*) consonant with the insights of the early heirs of Narâm-Sin. [MILLER & TAUBE, *An Illustrated Dictionary of the Gods and Symbols of Ancient Mexico and the Maya*, pp48–54]

NOTE that I prefer the term ‘half-moon’ to the more technical ‘first quarter’ – the cycle having “completed one-quarter of its journey, reckoning from new to new [moon]; also, we are seeing one-quarter of the total surface” [MOORE, *New Guide to the Moon*, p46] – both because it better reflects the subjective experience of the primitive observer and complements the conventional term ‘full moon’ employed even by modern astronomers

76-YEAR 940-LUNATION 27,759-DAY CALLIPIC CYCLE

29.530851 (27,759 ÷ 940) *average lunation*
 [ie, four Metonic cycles less a day]

304-YEAR 3760-LUN 111,035-DAY HIPPARCHIC CYCLE

29.530585 (111,035 ÷ 3760) *average lunation*
 [ie, four Callipic cycles less a day]

350-YEAR 4326-LUNATION 127,750-DAY MENDES CYCLE

$350 \times 365.2422 = 127,834.77$ days (*solar*)
 $350 \times 365 = 127,750$ days (*solar*) rounded
 $127,834.77 - 127,750 = 84.77$ *intercalary days (solar)*
 $127,834.77 \div 29.530588 = 4328.8934$ lunations (*lunisolar*)
 $127,750 \div 29.530588 = 4326.0229$ lunations (*lunisolar*) rounded
 $4326 \times 29.530588 = 127,749.32$ days (*synodic*)
 $4328.8934 - 4326 = 2.8934$ *intercalary lunations*
 $2.8934 \times 29.530588 = 85.443803$ *intercalary days (lunar)*

projecting an intercalation of 84 days – or twelve 7-day weeks – through 350 years: one week every 30 years for 11 rounds, with the final week added 20 years or two-thirds of the way through the twelfth round; a convergence cycle figured as $11\frac{2}{3}$ intervals – or 30-year ‘great months’ – of a modular 360° circuit portending a 360-year ‘great year’; or in otherwords, the 350-year ‘great year’ was implemented as $11\frac{2}{3}$ of an idealized circuit of 360°

500-YR 6180-LUNATION 182,500-DAY PHŒNIX CYCLE

25 years \times 365 days = 9125 days (25-year Apis cycle)
 309 lunations \times 29.530588 days = 9124.9516 days (Apis cycle)
 $9125 - 9124.9516 = .0484$ day discrepancy per cycle
 20 cycles \times .0484 day = .968 day (23 hours 14 minutes)

the ‘great year’ of the Phœnix or Benu bird – “a phoenix visited Heliopolis at the close of every period of 500 years” (p105, fn285) – accumulating a day (.968 day) every twenty Apis intervals

1767-YEAR COURSE / PHASE CONVERGENCE CYCLE

18.6 years (nodal cycle) \times 19 years (Metonic cycle) = 353.4 years
 (five such products compounding the smallest whole-year sum):
 $353.4 \times 5 = 1767$ years

$1767 \text{ years} \times 365.2422 \text{ days} = 645,382.9674 \text{ days}$
 $645,382.9674 \div 6793.5217 \text{ days (nodal cycle)} = 94.99976535 \text{ cycles}$
 $645,382.9674 \div 6939.6018 \text{ days (Metonic cycle)} = 93 \text{ cycles}$
 $18.6 \times 5 = 93 \text{ years (5 nodal regression cycles)}$
 $19 \times 5 = 95 \text{ years (5 Metonic cycles)}$
 $[93 \times 95 = 8835 \div 5 = 1767]$

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ISRÆLITE CENSUS MEASURES

$603,550 \div 22,000 = 27.43409$
 $603,550 \div 8580 = 70.343822 \approx 22.273 \pi$ (70.3732 with $\pi = 3.16$;
or 69.972634 with $\pi = 3.14159$)
 $603,550 \div 6940$ (235×29.531914) = 86.966858
 $603,550 \div 6939$ (235×29.527659) = 86.979391
 $603,550 \div 6792$ [$230 \times 29.530588 = 6792.0352 \text{ luns}$] = 88.861896
 $603,550 \div 6792.0352 = 88.861435$
 $603,550 \div 6792.65$ [$18.61 \text{ years} \times 365 \text{ days}$] = 88.853393
 $603,550 \div 87$ (3×29) = 6937.3563
 $603,550 \div 88.60764$ (3×29.530588) = 6811.4893
 $603,550 \div 365 = 1653.5616$
 $601,730 \div 364 = 1653.1043$
 $603,550 \div 364 = 1658.1043$
 $603,550 - 601,730 = 1820$ (ie, 364×5) [and since $40 \div 5 = 8$,
the decrease in census over 40 years signals the 8-year measure
– two calendars bracketed by the 40-year wilderness interval]
 $603,550 - 171,550 = 432,000$
 $601,730 \div 23,000 = 26.162173$
 $601,730 \div 8580 = 70.131701$
 $601,730 \div 171,550 = 3.5076071$
 $601,730 + 23,000 = 624,730$
 $171,550 \div 50,000 = 3.431$
 $171,550 = 470 \times 365$
 $22,273 - 22,000 = 273$
 $273 \text{ months} \times 29.530588 \text{ days} = 8061.8505 \text{ days}$
 $22 \text{ years} \times 365.2422 \text{ days} = 8035.3284 \text{ days}$
 $273 \text{ days} = 3 \text{ seasons} \times 91 \text{ days}$ [$\frac{3}{4}$ of a 364-day year]
 $273 \text{ days} = 39 \text{ weeks} \times 7 \text{ days}$ [39 weeks]
 $273 \div 12.368267 = 22.072615$ [273 months in 22 years $26\frac{1}{2}$ days]
 $273 \div 12.4 = 22.016129$ [~ 273 months in 22 years 6 days]
 $.273972 \times 365.2422 = 100.06613$ [100 days]
 $.273972 \times 365 = 99.99978$ [100 days]
 $70 \div 22.273 = 3.1428186$

$22,000 \div 365 = 60.273 \rightarrow [60 \times 365 = 21,900]$
 $22,000 \div 12.5 = 1760 \quad (16 \times 110)$
 $22,000 = 12.5 \times 22 \times 80$
 $21,900 \quad (60 \times 365) \div 6935 \quad (19 \times 365) = 3.1578947 \rightarrow$
 suggesting a ratio for π $[60/19 = 3.1578947]$
 $8580 \div 13 = 660$
 $8580 \div 12 = 715$
 $1760 \div 60.273972603 = 29.2$
 $470 \times 365 = 171,550$ days displaced
 $430 \times 365 = 156,950$ days in Egypt $(50,000 \times 3.139)$
 $40 \times 365 = 14,600$ days in the wilderness
cf. 603,550 [census]; 171,550 [470-yr]; 25,550 [70-yr]

430-YEAR ISRAELITE BONDAGE INTERVAL

$430 \text{ years} \times 365 \text{ days} = 156,950 \text{ days}$ (*rounded*)
 $[430 \text{ years} \times 365.2422 \text{ days} = 157,054.14 \text{ days}]$ *solar*
 $[157,054.14 \div 29.530588 = 5318.3546 \text{ lunations}]$ *synodic*
 $[430 \times 12.5 = 5375 \text{ lunations}]$ (*rounded*)
 $430 \div 8 = 53.75$ eight-year cycles
 $[156,950 \div 53.75 = 2920 \quad (8 \times 365 \rightarrow 2 \times 1460)]$
 $[156,950 \div 50,000 = 3.139]$

EGYPTIAN MACE-HEAD MEASURE OF NARMER

$1,422,000 \div 3.16 = 450,000 \quad (50,000 \times 9)$ [*ie*, 9 Israelite 430-year-bondage-in-Egypt intervals which would total 3870 years]
 $[1,422,000 = 100^3 \quad (1,000,000) + 75^3 \quad (421,875) + 5^3 \quad (125)]$
 $[1,422,000 = 29,514321 \times 132 \quad (11 \times 12) \times 365]$
 $[1,422,000 = 29,530588 \times 131.92728 \times 365]$
 $[1,422,000 \div 25,550 \quad (70\text{-year cycle}) = 55.6555577]$
 $[1,422,000 \div 55.83 = 25,470.177]$ *three-nodal cycle round-1*
 $[1,422,000 \div 56 = 25,392.857]$ *three-nodal cycle round-2*
 $[1,422,000 \div 20,440 = 69.569471]$ *three-nodal cycle round-3*
 $[1,422,000 \div 70 = 20,314.285]$ *three-nodal cycle round-4*
 $[1,422,000 = 25 \times 25 \times 60 \times 12 \times 3.16] \rightarrow 625 \quad (25^2) \times 3.16 = 1975$
 $[1,422,000 \div 720 \quad (60 \times 12) = 1975 \quad (12.5465^3)]$
 $[450,000 \div 720 = 625 \quad (5^4)]$
 $[450,000 = 360 \times 1250]$ *ie*, 1250 circuits of a 360-degree circle
 (perhaps 1250 lunar circuits: $1250 \times 29.530588 = 36,913.234$; or
 1250 full moons computed as 625 lunations: $625 \times 29.530588 =$
 $18,456.617 \div 365.2422 = 50.532542$ years; or $625 \times 30 = 18,750 \div$
 $360 = 52.083333 = 52$ years 1 month)

$[1,422,000 = 360 \times 1250 \times 3.16] \rightarrow 360 \times 3.16 = 1137.6$
 $[1,422,000 = 1250 \times 1137.6]$
 $1,422,000 = 360 \times 3950 \rightarrow 1250 (2 \times 25^2) \times 3.16 = 3950$
 $1,422,000 \div 1250 = 1137.6 = 3.16 \times 360$ ($\pi \times$ circumference,
 where the value of the customary circumference $[360^\circ]$
 transferred to the diameter produces a relative circumference
 of 1137.6; surrendering a ratio for π : $1137.6/360 = 3.16$)
 $1,422,000 = (360 \times 50) \times 79$; while $450,000 = (360 \times 50) \times 25$;
 together producing a ratio for π $[79/25 = 3.16]$ because
 $1,422,000 = 450,000 \pi$ $[9 \times 50,000 \times \pi]$
 $1,422,000 \div 18,000 (50 \times 360) = 79$
 $450,000 \div 18,000 (9 \times 2000) = 25$

PI MEASURES

$3.125 = 3\frac{1}{8} (25/8)$	BABYLONIAN
$3.16[22776] = \sqrt{10}$	EGYPTIAN <i>Aahmesu</i>
$3.16[04928] = 4(8/9)^2$	EGYPTIAN <i>Aahmesu</i>
$3.16[04935] = (16/9)^2$	EGYPTIAN $[\rightarrow 256/81]$
3	HEBREW (?)
$3.140845 = 223/71$	GREEK <i>Archimedes</i> [minim]
$3.142858 = 22/7$	GREEK <i>Archimedes</i> [maxim]
3.14166	GREEK <i>Ptolemy</i>
$3.15555 = 142/45$	CHINESE <i>Wang Fan</i>
3.14159	CHINESE <i>Liu Hui</i>
$3.16 = 1137.6/360$	EGYPTIAN <i>Narmer mace-head</i>
$3.16 = 79/25$	$[1,422,000/450,000 \rightarrow 711/225 \rightarrow$ $237/75 \rightarrow 79/25]$
$3.1428186 = 70/22.273$	ISRAELITE <i>census record</i>
	$[603,550 \div 8580 = 22.273 \pi]$
$3.139 = 156,950/50,000$	<i>bondage interval</i>
$= 3139/1000$	$[365 \times 430 \text{ years in Egypt}]$
3.1415926535	$[\pi \text{ to ten decimal places}]$

NOTE that a circumference of 360° projects a vlaue for π of
 3.1578947 (with diameter of 114) which surrenders a ratio of 60/19
 – conceivably an early measure of the relation of diameter to
 circumference $[360 \div 3.141593 = 114.59154; 360 \div 3.16 = 113.92405]$

LUNATION MEASURES

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29.550339 ('25-year' 309-lunation 9125-day) [+ 28 mins 26 secs]
 29.537572 ('70-year' 865-month 25,550-day) [+ 10 minutes]
 29.531914 (19-year 235-month 6940-day) *Meton* 432 BC [+ 2']
 29.530851 (76-year 940-lunation 27,759-day) [+ 22.7 seconds]
Callippus 330 BC
 29.530588 days per lunation (*synodic measure*)

Hipparchus 150 BC
 29.530585 (304-year 3760-lunation 111,035-day) [– ¼ second]
 29.530434 ('18.61-year' 230-lunation 6792-day) [– 13 seconds]
 29.530434 ('56-year' 690-lunation 20,376-day) [– 13 seconds]
 29.529411 (11-year 136-month 4016-day) [– 1 minute 42 seconds]
 29.50505 (8-year 99-month 2921-day) [– 36 minutes 47 seconds]
 29.12 (8-year 100-month 2912-day) [– 9 hours 51 minutes]

NOTE because a lunation or lunar cycle (29.530588 days) doesn't divide evenly into a year or solar cycle (365.2422 days) ancient astronomer-priests computed calendrical cycles which would allow them to rationalize as near as possible, a compound of years with a number of whole lunations. How close to the length of a lunation these various cycle measures came, is shown to the right. The Egyptian priestly 25-year lunar calendar – which effectively rationalized 309 celestial lunations (9124.9516) with 25 calendar years of 365 days (9125 days) – failed miserably (as evidenced by the average length of 309 lunations in 25 solar years: 29.550339 days) to synchronize the actual lunar and solar cycles.

$365.2422 \text{ days} \div 29.530588 \text{ days} = 12.368267 \text{ months}$ (*lunisolar*)
 $[12 \text{ lunations} \times 29.530588 \text{ days} = 354.36705 \text{ days}]$ *lunar year*
 $[12 \text{ months} \times 29.5 \text{ days} = 354 \text{ days}]$ *lunar year (rounded)*
 $24 \text{ hours} \times 29.530588 \text{ days} = 708.73411 \text{ hours per lunation}$
 $[24 \text{ hours} \times 29.5 \text{ days} = 708 \text{ hours}]$ *average lunation*

$[2 \times 354 = 708]$
 $[118 \times 29.5 = 3481 \text{ days} = 59^2 \rightarrow 118 = 59 \times 2 \text{ } \cancel{= 59} = 29 + 30]$
 $[339 \times 29.5 = 10,000.5 \text{ days}]$

ANOMALISTIC MONTH <i>perigee to perigee</i>	27.55455 days
DRACONIC MONTH <i>node to node</i>	27.21222 days
SIDEREAL MONTH <i>fixed star to fixed star</i>	27.32166 days
TROPICAL MONTH <i>equinox to equinox</i>	27.32159 days
SYNODIC MONTH <i>full moon to full moon</i>	29.530588 days

“In discussing the various types of month above, I gave values for their lengths with some accuracy, but in every case these were *average* durations, although I did not specifically say so at the time. The averaging must be done, figuratively speaking, over hundreds of months – in fact, over some *decades* – for the values to have any real meaning, because there are many factors which lead to short-term alterations in the precise periods from one orbit to another.

“The theory of the motion of the Moon is one of the most complicated problems in celestial mechanics, and it has occupied the careers of many great scientists from Newton’s day to this. If the Hawking rule cited at the start of this book were true – that every equation halves the potential sales of a book – then no book would ever have been published on the lunar theory; actually, many have, but they are not best-sellers. The equation one needs to employ if one wants to *calculate* (as opposed to *observe*) the precise position of the Moon at any instant has over 1500 terms.

“The determination of the mean synodic period does not actually result from timing the Moon for thousands of years, but from precise, shorter-term observations which allow us to make the required calculations. The ancients derived the lengths of the synodic month and the solar year using repeating intervals between eclipses over centuries.

“For calendrical purposes we are only really interested in the synodic month, the time between similar lunar phases (between full moons, say)...the synodic period is more than the time taken to circle/orbit the Earth, and the 29.53059 days is *not* precise: it’s an average over many months, so that full moons/new moons do not occur as regularly as clockwork. That mean value is given to five decimal places, whereas the time span of a lunation can vary in the first decimal place, ranging between 29.2 and 29.8 days, up to an eight-hour deviation in either direction from the average.”

[STEEL, *Marking Time*, pp394/5]

One of the most complicated problems in celestial mechanics occupying not only the “great scientists from Newton’s day to this” but also their figurative ancestors back to the days of the cavemen – that observable deviation in lunation length greater than a half-day inciting the progressive conception of a considerable variety of calendrical measures which were preserved by the lunar priests who undertook to secrete the relevant figures of their preferred sacred measure in memorable narratives we term ‘religious’ or ‘mythical’. *All religion proving quintessentially calendrical.*

FIGURES

YEARS	MONTHS	DAYS	CENSUS
	$\frac{1}{2}$	15	
	1	29.5	
	1	30	
1	12 (29.5)	354	
1	12 (30)	360	
1	12.368267 (29.530588)	365.2422	
8 (364)	100	2912	
8 [365.125]	99	2921	
11 (365)	136	4016	
18.61 [365]	230	6792	
19 [365.25]	235	6940	
			8580
25 (365)	309	9125	
40 (365)	494	14,600	⌘
50 (365)	618	18,250	
56 [365]	690	20,376	
			22,000
			22,273
			23,000
			24,000
70 (365)	865	25,550	
76 [365.25]	940	27,759	
304 [365.24671]	3760	111,035	
350 (365)	4326	127,750	
430 (365)	5315	156,950	⌘
470 (365)	5809	171,550	⌘
500 (365)	6180	182,500	
1461 (365)	18,058	533,265	
			601,730
			603,550
1767 [365.24221]	21,855	645,383	
3950 (360)	48,822	1,422,000	
21,000 (<i>relative precession cycle</i>)			
25,800 (<i>precession of equinoxes: clockwise</i>)			
110,000 (<i>precession of perihelion: counter-clockwise</i>)			
[⌘ signifies Israelite bondage and wilderness measures]			

CHRONOLOGY

874–852	Ahab eighth king of Israel	<i>Baal</i>
800–700	Greek 8-year calendar [STEEL; cf, p13]	<i>Zeus</i>
776	first Olympiad (coinciding with the traditional date of the introduction of the alphabet – which, as I have conjectured [pp73, 79], was conceived as a mnemonic for the variable-month Set measure)	
760	Greeks colonize Italy (Cumæ)	
759	Temple severely damaged by earthquake	
753	traditional date of the founding of Rome	
747	first cataclysm [VELIKOVSKY; cf, p96]	
736–715	Ahaz twelfth king of Judæa	<i>Baal</i>
722	Assyria deports northern tribes of Israel	<i>Ashur</i>
716–687	Hezekiah thirteenth king of Judæa	<i>Yahweh</i>
708	Crotona founded by Achæans	
702	second cataclysm	
687	last of three cataclysms	
687–642	Manasseh fourteenth king of Judæa	<i>Baal</i>
663	Assyria takes Thebes (Egypt)	<i>Ashur</i>
642–640	Amon fifteenth king of Judæa	<i>Baal</i>
640–609	Josiah sixteenth king of Judæa	<i>Yahweh</i>
640–550	Thales of Miletus	
625	Chaldeans expel Assyrians from Babylon	<i>Marduk</i>
621	Hilkiah recovers the Book of the Law from the ruins of the Temple at Jerusalem	
615	Thales visits Egypt	
609	Assyria extinguished by the Babylonians	
609–597	Jehoiakim eighteenth king of Judæa	<i>Baal</i>
597–587	Zedekiah twentieth king of Judæa	
597	Babylonia invades Judæa	<i>Marduk</i>
587–539	Babylonian exile of Judæans	
582	Seven Sages of Greece recognized	
569–490	Pythagoras of Samos	
551–547	Pythagoras retreats to Carmel	
547–525	Pythagoras visits Egypt	
539	Persia takes Babylon	<i>Mazda</i>
538	Judæans begin returning home	
530	Chaldean Babylonians adopt 8-year calendar	
525	Persia takes Memphis	
525–513	Pythagoras taken to Babylon	
515	Second Temple completed	<i>Yahweh</i>
513	Pythagoras establishes his <i>Semicircle</i> at Samos	

- 505 Pythagoras removes to Crotona
- 460–455 Herodotus visits Egypt
- 458–444 Ezra presiding in Jerusalem
- 445–433 Nehemiah acting governor of Judæa
- 432 Meton establishes the 19-year calendar
- 380 Persians adopt the 19-year calendar at Babylon
- 332 Alexander takes Tyre
- 331 Alexander takes Egypt ^A
- 330 Callipus proposes the 76-year calendar
(from the new Egyptian city of Alexandria)
- 330 Alexander defeats the Persians at Gaugamela
- 323 death of Alexander at Babylon (the year Manetho's
kinglist ends)
- 279 Brennius and the Boii desecrate Delphi
- 250 Eratosthenes compiles "the first scientific
chronology" ^B
- 238 Canopus Decree of Ptolemy III (a calendar reform
vehemently rejected by the Egyptian priests) ^C
- 198 Seleucids dominate Palestine
- 168 Antiochus IV Epiphanes prohibits Judaism
(and thereby the Judaic calendar)
- 168–163 Maccabean revolt
- 165 the books of the prophets collated into the Canon
of the Hagiographa (supplementing the Pentateuch)
- 150–63 Hasmonæan rule in Jerusalem
- 63 Pompey renders Palestine a Roman province
- 45 Julian reform of the calendar (on the advice of
Sosigenes of Alexandria – incorporating insights
from both Callipus and the Canopus Decree) ^D
- 44 Julius Cæsar assassinated
- 31 Augustus converts Egypt to a Roman province

A "The Greek documents of Ptolemaic Egypt offer numerous equations between the Macedonian and the Egyptian dates. ...The evidence shows that until c. 240 the Macedonian months agreed with the moon. It appears that the calendar was regulated by the Egyptian 25-year cycle. As in the old Macedonian calendar, an intercalary month was inserted every other year, though the cycle required only nine intercalations (1309 [*sic – ie*, 309] lunar months = 25 Egyptian years = 9125 days)." [BICKERMAN, *Chronology of the Ancient World*, p38]

B BICKERMAN, *op cit*, p63

C BICKERMAN, *op cit*, p41

D STEEL, *Marking Time*, p65

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- CAUCASUS ("70 [Bak] tribes came together in [the Caucasus], though others, who care nothing for the facts, actually say 300 [Dan]" — STRABO XI: ii.16, VOL V, p209)
[NOTE that the denizens comprised two distinct tribes, the Ur and the Al, whose resonance is detectable in the appellations of their descendants: eg, Mer-ope and Ur-ope (Europes); Alan, Albani, Atlanti, Chaldee, Itali; "The low country was then called Ur-on and its inhabitants Ur-ab or Ab-ur. The mountainous district was called Al-on and its inhabitants Al-ab or Ab-al. Ur means "fire" or "light". Al means "high" or "height". On means "place". Ab means "out of" or "from".... The word Ash originally meant "up out of", and then "east", as that was the place where the sun came up out of. Later it meant "wood", especially a kind of white poplar which grew in the Acheron Valley. Aps meant "the east". The word Æd or Æt was applied to the west coast and those dwelling there.... The word Æd or Æt meant "the sea" but not in the same way as the word "ocean". Ocean was the "river place"... the home of the tribe of rivers. But æd or æt meant what was there when you went into a dark cave; it was the black void; it was the sea in that sense and it carried with it the idea of darkness or blackness." — FESSENDEN, *The Deluged Civilization of the Caucasus Isthmus*, p31] 150, 151, 219, 220, 231, 235, 236, 240, 242, 344, 402
- ÆA [Caucasus valley, south of the Caucasus range; identified as *Eden* or *Ædon*: the first Athens; cf, Dan] 126, 219, 220, 230, 231, 236, 240, 242
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- Daniel Pass (Erebus Pass, cf, Ur-ab; Aragus Valley; Caucasian Gates)
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[Pythagorean astronomer-geometer
whose work entitled *Octaëteris* was
composed in his twenty-fourth year
(383 BC) during a 16-month retreat
in Egypt — DIOGENES LÆRTIUS
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PYTHAGORAS (569–490)
 [NOTE that the allegorical aspects of his 'life' protract a fraternity of seers born, with script, to maintain and preserve the lunar insights: "This is what Heraclides of Pontus tells us he used to say about himself: that he had once been *Æthalides* and was accounted to be *Hermes'* son [*Hermes*, who also fathered script], and *Hermes* told him he might choose any gift he liked except immortality; so he asked to retain through life and through death a memory of his experiences [the gift of securing memory with script]. Hence in life he could recall everything, and when he died he still kept the same memories. Afterwards in course of time his soul entered into *Euphorbus* and he was wounded by *Menelaus*. Now *Euphorbus* used to say that he had once been *Æthalides* and obtained this gift from *Hermes*, and then he told of the wanderings of his soul, how it migrated hither and thither, into how many plants and animals it had come, and all that it underwent in *Hades*, and all that the other souls there have to endure. When *Euphorbus* died, his soul passed into *Hermotimus*, and he also, wishing to authenticate the story, went up to the temple of *Apollo* at *Branchidae*, where he identified the shield which *Menelaus*, on his voyage home from *Troy*, had dedicated to *Apollo*, so he said: the shield being now so rotten through and through that the ivory facing only was left. When *Hermotimus* died, he became *Pyrrhus*, a fisherman of *Delos* [seat of the Peoples of the Sea, and birthplace of *Apollo*, who instituted the Oracle at *Delphi* after slaying the *Python* – the *Pytho* or priestess installed in his place, like *Pythagoras* her namesake, proving prophetic expressly as the voice or mouthpiece of the 'serpent': ie, the course cycle of the moon], and again he remembered everything, how he was first *Æthalides*, then *Euphorbus*, then *Hermotimus*, and then *Pyrrhus*. But when *Pyrrhus* died, he became *Pythagoras* [the fifth of five incarnations, to emphasize reduction of the five intercalary days of the antecedent *Bel* 360-day year, into the single intercalation of the *Dan* 364-day correlative – resounding the clarion E at *Delphi*], and still remembered all the facts mentioned." — *DIODEGENES LÆRTIUS, Lives of Eminent Philosophers* VIII:4/5, VOL II, pp323–5] 15:38, 15:39, 50, 86:232, 96, 109:297, 134, 140:399A, 145:414B, 146:417, 155:455, 183, 184,

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likewise advocated the Middle Way (“due proportion”) as well as the transmigration of the soul. At death his bones were purportedly divided into eight parcels – like the Buddhist eightfold path, memorializing the *octæteris*. Brahma, it bears repeating, represents the Aryan diffusion of the Abraham 8-year 99-month measure. Prepared for cremation with all the honours of a king, Buddha’s body was swaddled in 500 layers of cloth – summoning the 500-year Phoenix ‘great year’ measure, demanding the cremation or sacrifice of a single ‘great year’ day (‘enlightened one’ = *Buddha*) on its demise.] 239:52

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 Baugi
 Bergelmir
 Bolthorn (father of Bestla)
 Gilling (father of Suttung)
 Hœnir (brother of Odin)
 Hræsveglur (gatekeeper)
 Hrim
 Hrumgnir
 Hymir (father of Tyr)
 Kvasir (wisdom)
 Lodur (brother of Odin)
 Magni (son of Thor)
 Mimir (keeper of well of wisdom)
 Sigi (son of Odin)
 Skirnir (Freyr's envoy)
 Skrymir (king of the giants)
 Starkadhr
 Surtr (king of the Muspel or fire-giants)
 Suttung
 Thiassi (father of Skadhi)
 Thrym
 Vafthrudni (wise man)
 Vali (son of Odin)
 Ve (brother of Odin)
 Vidar (silent god of strength)
 Vili (brother of Odin)
 Ymir, Orgelmir (progenitor of the giants)

PERSONÆ: WORTHIES

JOTUNNA (18 giantesses; *cf.* 19 horses of Nordic myth – including Odin's 8-legged mount Sleipnir, embodying the 8-year great year)

Bestla (mother of Odin)

Elli (crone)

Grid (wife of Odin; mother of Vidar)

Gunlod (mother of Bragi)

Hlodyn (mother of Thor)

Hyndla

Hyrrokin

Jarnsaxa, Jancara (wife of Thor;

mother of Modi and Magni)

Jörd, Fjorgyn (first wife of Odin; mother of Thor)

Nott (mother of Jörd)

Ran (sister and wife of Ægir)

Rinda (wife of Odin)

Sif (second wife of Thor; mother of Ull)

Thaukt

VANIR

Gefjon (Freyja)

Gerdh (wife of Freyr)

Gullveig

Skadhi (sky-goddess and snow-queen; wife of Njörd)

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NORSE (9 realms [ie, the 9 Regents – cf, p92:248H], all accessible only to Odin [cf, Aten, the god – or moon – in all its forms] who presided over 12 dominant Æsir gods and either 24 or 30 goddesses)

VANIR (underworld segment of the pantheon; gods of fertility, resident in the mortuary west; the Don people; ie, the 3 days and 2 nights preceding the birth of Odin, the new moon; cf, 'vanguard' in relation to Asgard, Midgard and Utgard). The Vanir were disposed to defeat the Æsir just as the dark divide extinguishes the majestic column of lunar champions following the demise of waning crescent, Osiris.

GODS (2)

Freyr (fertility)
 Njörd (sea-god, father of Freyr and Freyja)

GODDESSES (3)

Freyja (sister of Freyr)
 Gefjon (Freyja)
 Nerthus (wife of Njörd, Germanic earth-mother)

ÆSIR (cf, Osiris)

GODS (11 plus Odin plus the two Vanir crossover gods; ie, 12/3 Aten = a lunisolar pantheon)

Balder (son of Odin; beauty) 49, 50:145

Bragi (son of Odin; poetry)
 Forseti (son of Balder; justice)
 Freyr (VANIR crossover)
 Heimdall (son of Odin; guardian of Rainbow Bridge)
 Hermod (son of Odin; Hermes)
 Hodur (son of Odin; blind twin of Balder)

Loki (son of Farbauti; fire-god and trickster; Set)

Njörd (VANIR crossover)

Odin (supreme god; Aten) 325

Thor (Donar; cf, Dan; eldest son of Odin; war-god: Horus or Ares)

Tyr (son of Odin; war)

Ullr (step-son of Thor; winter)

Vidar (son of Odin)

GODDESSES (ASYNJOR)

Beda
 Bil (seized with Hjuki by moon-god Mani)
 Eir (healing)
 Erde
 Fimla, Frimla

Sumerian

Frigga (wife of Odin)
 Fulla (sister of Frigga)
 Gna (messenger)
 Hel, Holde (daughter of Loki; Isis)
 Hjúki (seized with Bil by moon-god Mani)
 Hnoss (daughter of Freyja)
 Horn (Freyja)
 Idunna (wife of Bragi; keeper of the apples of youth)
 Lin
 Lofn (love troubles)
 Lytir
 Mardoll (Freyja)
 Menglad (Freyja)
 Nanna (wife of Balder; mother of Forseti; cf. Inanna)
 Saga (history)
 Siguna, Signy (wife of Loki)
 Sjöfyn (Cupid)
 Skadhi (Vanir sky-goddess giant and snow-queen; wife of Njörd)
 Snotra
 Svol
 Syn (doorkeep)
 Syr (Freyja)
 Vanadis (Freyja)
 Var (love vows)
 Vor (prudence)

PROGENITORS
 Ægir, Gymir (ocean)
 Bor (son of Buri; father of Odin)
 Buri (progenitor of the Æsir gods)
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 historians say many things that are
 not true, because they were accustomed
 to falsehoods on account of the use of
 myths in their writings; and on this
 account too, they do not agree with one
 another concerning the same things.*" —
 STRABO VIII: iii.9, VOL IV, p39; with
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 "*The stories the Greeks tell are many
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[2] attachment

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[4] EIGHTFOLD PATH [*cf.* octad, *octeteris*]

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ECUMENICAL

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Athanasian (340)

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Carthusian (1084)

Cistercian (1098)

Franciscan (1210) [mendicant]

Dominican (1217) [mendicant]

Jesuit (1534)

[NOTE that the mendicant orders may have risen in response to the Knights Errant – Templars, Grail Knights, *et al* – who circulated heretical precepts in their travels, beliefs echoed in the songs of the itinerant bards – the Troubadours, Trouvères, Minnesingers, Giullari, Minstrels, Skalds, Joculatores and Jesters whose *massenique* inspired new faith in ancient traditions; *cf.* *Masonic*]

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- Clement of Rome (90–99)
- Evaristus of Greece (99–105)
- Alexander of Rome (105–115)
- Sixtus of Rome (115–125)
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- Marcionite
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- Montanist
- Nestorian
- Paulician
- Pelagian (405 AD)
- Phibionite
- Quartodeciman ('fourteeners' who persisted in observing Easter on 14 Nisan – Passover – after the Synod of Arles, 314)
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 Gemara [225–400 AD]
 Haggadah (narrative Midrash)
 Halakah (legal Midrash) [200 BC]

MIDRASHIM [600–1200 AD]

Rabbah (cycle of ten books)
 Tanhumah
 Pesiqta (homilies)

MISHNAH (63 tracts in six orders)
[210 AD]

Zeraim (agricultural laws)
 Moed (festivals)
 Nashim (family laws)
 Nezikin (civil/criminal law)
 Kodashim (sacrifices)
 Toharoth (purifications)
 Peshat (plain exegesis)
 TALMUD (Gemara + Mishnah)
 [400–500 AD]
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 that which is called Regularity, there
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as one is to two, so ten is to twenty.
 The other is conjoined, thus: as one is
 to two, so two is to four. Because in
 it two is said twice, both when we
 compare it with one, and then when
 we compare it with four, this kind
 is also said to be fourfold by nature.
 So the cithers [guitars], though with
 seven strings, are none the less said to
 have two sets of four strings, because
 just as the sound of the first string
 stands in a certain relation to that
 of the fourth, so the fourth stands
 in the same relation to the seventh;
 the middle string is the first of the
 one set and the last of the other.” —
 VARRO, *On the Latin Language*
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Atlas (not as conventionally situated
in Mauretania/Morocco but rather
in the Caucasus: *ie*, Mt Elbruz)

"These apples [of the Hesperides] were
not, as some have said, in Libya, but
on Atlas among the Hyperboreans."

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